

**2023 Update of the
Maple Grove Gravel Mining Area
Alternative Urban Areawide Review (AUAR)**

**Prepared for the
City of Maple Grove, MN**

**By
Stantec Consulting Services, Inc.**

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Introduction

This Environmental Assessment Worksheet (EAW) form is being used to record the Alternative Urban Areawide Review (AUAR) Update for the City of Maple Grove's Gravel Mining Area. An AUAR is an alternative to an Environmental Impact Statement (EIS) that responds to the questions on the EAW form to the level of analysis similar to an EIS. This EAW form and AUAR Guidelines are available at the Environmental Quality Board's website at:

<http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm>.

Minnesota Rules Chapter 4410.3610, subp. 4 states that “the content and format [of an AUAR document] must be similar to that of an EAW, but must provide for a level of analysis comparable to that of an EIS for impacts typical of urban residential, commercial warehousing, and light industrial development and associated infrastructure.” The EAW and AUAR Guidelines provide additional details and resources for completing the EAW form for an AUAR and conducting the AUAR review process. The following document follows the format of the July 2013 Environmental Assessment Worksheet Form.

Background

The Maple Grove Gravel Mining Area (GMA) consists of almost 2,000 acres of active gravel mines and mixed-use development less than fifteen miles from downtown Minneapolis at the northwest corner of the Twin Cities Metropolitan Area. The GMA is located in the City of Maple Grove (City) and its southern boundary lies along interstate 94 (I-94) between State Trunk Highway (TH) 169 on the east, and the Interstate 494 (I-494) /I-94 interchange on the west.

In the early 1990s, it became apparent to the City that considerable land within the GMA would become available for development over approximately the next thirty years. To address this possibility, the City convened a Gravel Mining Area Task Force (GMA Task Force) to advise the City on future GMA development and began coordination activities with various metropolitan and regional agencies.

By the mid-1990s, planning and coordination of activities had proceeded sufficiently that the City decided to prepare an AUAR to address the potentially significant environmental impacts which could arise from the GMA development. This referenced review, prepared and adopted in 1996, was called the *Maple Grove Mining Area Alternative Urban Areawide Review* (GMA

AUAR). In 2005, the City adopted the Update of the Maple Grove Gravel Mining Area Alternative Urban Areawide Review and Mitigation Plan (2005 Update).

The Environmental Review Rules (Rules) of the Minnesota Environmental Quality Board (EQB) state that, when five years have passed since the adoption of an AUAR, it must be updated to remain valid. The City completed subsequent updates to the AUAR and mitigation plan in 2010 and 2017.

More than five years have passed since the adoption of the 2017 Update; therefore, the City has prepared this *2023 Update of the Maple Grove Mining Area Urban Areawide Review and Mitigation Plan* (2023 Update) to update the analyses and the plan for mitigation in the GMA AUAR and to maintain the validity of the 2017 Update. Additionally, the City completed an update to its Comprehensive Plan and guidance for the Gravel Mining Area, which is included as a scenario in this AUAR update.

1. Project Title

2023 Update of the Maple Grove Gravel Mining Area Alternative Urban Areawide Review and Mitigation Plan

2. Proposer

Proposer City of Maple Grove
Contact Peter Vickerman
Title Planning Manager
Address P.O. Box 1180
12800 Arbor Lakes Parkway
Maple Grove, MN 55311
Phone 763.494.6046
Email PVickerman@maplegrovern.gov

3. RGU

Proposer City of Maple Grove
Contact Peter Vickerman
Title Planning Manager
Address P.O. Box 1180
12800 Arbor Lakes Parkway
Maple Grove, MN 55311
Phone 763.494.6046
Email PVickerman@maplegrovern.gov

4. Reason for AUAR Preparation

Five years have passed since the City adopted the 2017 Update. For the GMA AUAR to

remain valid, an update is now required pursuant to Minn. Rules 4410.3610, subp. 7.A. The City also adopted the mandatory 2040 Comprehensive Plan update and Gravel Mining Area Special Area Plan in March 2020, and therefore is required to update the AUAR.

5. Project Location

County: Hennepin County

City: Maple Grove, MN

PLS Location (1/4, 1/4, Section, Township, Range): All or a portion of Sections 13, 14, 22, 23, 24, 25, 26, and 27; Township 119 North, Range 22 West

Watershed (81 major watershed scale): Mississippi River – Twin Cities Watershed

GPS Coordinates: Approximately 45.098487, -93.421909

Attach each of the following maps to the EAW: county map, USGS map, and a site plan. *AUAR Guidelines: The county map is not needed for an AUAR. The USGS map should be included. Instead of a site plan, include: (1) a map clearly depicting the boundaries of the AUAR and any subdistricts used in the AUAR analysis; (2) land use and planning maps as required in conjunction with items 9 and 27; and (3) a cover type map as required for item 10. Additional maps may be included throughout the document wherever maps are useful for displaying relevant information.*

6. Project Description

a. Provide a project summary of 50 words or less to be published in the EQB Monitor.

The City of Maple Grove is updating the Maple Grove Gravel Mining Area Alternative Urban Areawide Review a fifth time, originally approved in 1996. The 2023 Update summarizes development activity in the Gravel Mining Area since 2017 and includes the assumptions in the adopted 2040 Comprehensive Plan Update.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

The approximately 1,907-acre planned development site that is the subject of this 2023 Update is located in the City of Maple Grove. The southern boundary lies along interstate 94 (I-94) between State Trunk Highway (TH) 169 on the east, and the Interstate 494 (I-494) /I-94 interchange on the west. The 2023 Update is being prepared for all 1,907 acres comprising the development site (AUAR area). The AUAR area currently consists of active gravel mines and mixed-use development.

The Proposer (City) desires to continue to redevelop the AUAR area into a mix of commercial, office, industrial, residential, and public uses; and associated ponding and arterial rights-of-way.

Previous AUAR updates stated that projecting the pace of development in the GMA depends on how fast land is mined for aggregate and when developers want to construct projects. As to mining, how much and what land becomes available depends on both the market for aggregates and sequencing of mining. The market for aggregate is tied to the general economy as is presently very evident. The sequence of gravel mining responds to the natural randomness in location of varying raw aggregate products. In short, predicting what land will become available for development, and when, is difficult.

As to development within the GMA, the market for differing types of development is driven by the national economy and the local real estate market. Neither is susceptible to precise analysis. However, as required by the Metropolitan Council, the City completed its 2040 Comprehensive Plan Update in March 2020, which included a staging plan for the Gravel Mining Area through 2040. The staging plan was subsequently approved by the Metropolitan Council.

c. Project Magnitude

Total AUAR Acreage: 1,907 acres

No changes have been made to the project magnitude since the 2017 Update. Table 6-1 summarizes the development magnitude data for the 2023 Update Alternative. The City included this Alternative in its 2040 Comprehensive Plan Update (CPU).

The intention of this AUAR is to examine the maximum build out of the study area. By analyzing the requirements of a maximum build out scenario, the City may ensure that any development within and up to the maximum build (e.g., a 'middle' scenario) has been accounted for in this study. Due to this, no lesser build scenarios were examined, as they are encompassed in the maximum build out scenario. The development scenario included in the 2040 Comprehensive Plan Update complies with the requirement that one of the Alternatives studied in the AUAR is consistent with the Comprehensive Plan.

2023 Maximum Development. The 2023 Maximum Development Scenario assumes that all land in the GMA will develop to its maximum allowed intensity. The acreage figures for the 2023 Maximum Development Scenario represent how the current GMA acreage is guided by the City. See Table 6-1 for guided acreages. The nomenclature of the land uses has changed over the years, so the 2023 Maximum Buildout is a combination of several future land use categories. The development intensity for the 2023 Maximum Development Scenario, shown in Figure 6-1, represent the maximum development that could occur in the GMA based on the City's future land use map.

Table 6-1: Development Scenario

Land Uses	2017 No Further Build (acres)	2017 Maximum Development (acres)	2023 Maximum Development (acres)
Commercial	217.86	299.25	329
Office	21.0	228.92	208
Industrial	219.78	395.74	567
Residential	316.84	479.24	508
Public	65.34	108.5	49

Ponding	122.31	243.85	246
Arterial Right-of-way	139.26	151.2	N/A**
Gravel Mining	804.74	0.0	0
Total	1907*	1907*	1907*

*Rounded to nearest acre

**Arterial ROW included with other uses

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The Maple Grove GMA consists of almost 2,000 acres of active gravel mines and related activities less than fifteen miles from downtown Minneapolis, with superb visibility and access to the regional highway system, at the northwestern corner of the Twin Cities Metropolitan Area. The current mining activities are fully permitted, and as such the GMA does not face the same kind of environmental review concerns that other parcels of raw undeveloped land often face. As a huge expanse of largely unoccupied land within the Metropolitan Urban Service Area in a rapidly growing suburban setting, it represents a unique opportunity for the region to develop a different sort of built suburban environment while meeting the area's needs for additional housing, good and services, employment, and recreation.

With many years of useful gravel resources still to be extracted from portions of the area, the City continues to master plan the area when the mining ceases. The vision for the area is to continue to create a distinctive environment that blends the desirable elements of typical suburban life with the character and pedestrian scale of more traditional neighborhoods. Additionally, the City continues to promote high density housing opportunities, as well as affordable and accessible housing for citizens in all stages of the life cycle.

The project continues to serve as a major development opportunity for the City of Maple Grove. The site is currently home to the GMA and is underutilized. The development will continue to increase housing options and availability and provide recreation opportunities, hospitality, and commercial services to the area. The City and the region will be positively impacted by the increased revenue and property taxes generated by development on the site, as well as enhancements to services, jobs, and recreational opportunities in the region.

e. Are future stages of this development including development on any other property planned or likely to happen? ☒ Yes ☐ No
If yes, briefly describe future stages, relationship to present project, timeline, and plans for environmental review.

The site is currently planned to be developed continuously over the next seventeen years in response to market demand (as per 2040 Comprehensive Plan).

Figure 6-1 depicts the future land use from the 2040 Comprehensive Plan, which represents the site at full build-out.

f. Is this project a subsequent stage of an earlier project? x Yes ☐ No

Development since the adoption of the 2017 Update is discussed in Question 7 and can be seen in Table 7-1 below. Figure 7-1 depicts the major development and changes in land cover type since the 2017 Update.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

7. Cover Types

The original AUAR did not provide an overlay given the limited cover types in the GMA, including wetland and current development that largely involved gravel mining activities. In the 2017 Update, a table and coverage type map were used from the 2010 Update, which illustrated the urban commercial, urban office, industrial, urban residential, public facilities, parks, groundwater ponding, stormwater ponding, wetland, and arterial street rights-of-way. An updated version of that table is included later in this question.

Development has occurred within the AUAR area since the 2017 Update. The changes in cover type from the 2017 Update can be seen in Table 7-1 and in Figure 7-1.

Table -1: Changes in Cover Type since 2017 Update

Name	Developmental Change (in acres)	Previous Cover Type
Applewood Pointe (HDR)	5.582	Open land/reclaimed gravel mine
Mills Creek (L-MDR)	15	
Arbor Lakes Commerce Center (I)	13	
Arbor Lakes Business Park (RMU – non retail)	51.182	
Schuler Shoes (RMU – E Elm Creek Blvd)	6.079	
Foss Swim School (RMU)	2.092	
Donegal South (MDR)	13.512	
Total developmental changes:	106.447 acres	106.447 acres

This developed land can be further divided by land use types including urban commercial, urban office, urban industrial, and urban residential. Although all developed land, the distinction between these categories is important. Industrial, commercial, and office developments often have a higher percentage of lot coverage than residential uses. This can have impacts on habitat, stormwater management, urban heat island effects, and visual screening. These impacts are discussed further in each question of the AUAR. Table 7-2 has been updated from the 2017 Update to reflect these different developed land uses.

Table 7-2: Summary of Cover Types in Acres – Changes since 2017

Land Cover Type	Acres
Urban Commercial	227.33 (+ 8.171)
Urban Office	21 (no change)
Urban Industrial	283.96 (+ 64.182)
Urban Residential	324.17 (+ 34.094)
Public Facility	16.90 (no change)
Park	48.44 (no change)
Stormwater Ponds	62.19 (no change)
Groundwater Ponds	60.12 (no change)
Arterial Road	139.26 (no change)
Gravel Mining	724.01 (- 106.447)
TOTAL	1,907 (rounded to nearest whole acre)

8. Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 8-1 lists all permits that are anticipated to be required or may be required depending on the specific project type, for development in the AUAR area.

Table 8-1: Anticipated Approvals and Permits Required

Unit of Government	Type of Approval or Permit	Status Update
City of Maple Grove	Comprehensive Plan Updates and/or Amendments	Applicable to future development.
	Site Plan Review	
	Subdivision Approval	
	Grading Permit	
	Sewer Connection Permit	
	Water Connection Permit	
	Building Permits	
	MN Local/State/Federal Application for Water/Wetland Projects and the Wetland Replacement Plan Supplement	
Shingle Creek Watershed District	Project Review Approval	
Hennepin County	County Roadway Improvements (minor arterials)	
	County Roadway Access permits	
	Sanitary Sewer Plan Approval	
	Small Generator Hazardous Waste Permits	
	Improvements to I-94, I-694, and TH 169	

Minnesota Department of Transportation	Application for Access Driveway	
	Application for Drainage Permit	
	Application of Utility Permit on Trunk Highway	
	Right-of-way permit for work within or affecting MnDOT right-of-way	
Minnesota Department of Health	Water Main Plan Review	
	Notification or Permit for Well Construction or Alteration	
	Notification or Permit for Well Sealing	
Minnesota Department of Natural Resources	Public Waters Work Permit	
	Water appropriation permit and pre-construction permit (for new municipal well, if well needed)	
	Temporary Water Appropriation Permit for construction dewatering	
Minnesota Pollution Control Agency	Air Emission Facility Permit	
	401 Water Quality Certification	
	NPDES MS4 Stormwater Discharge Permit	
	NPDES Stormwater Permit	
	Sanitary Sewer Extension Permit	
Metropolitan Council	Minor Comprehensive Plan Amendment Approval	
	Wastewater System Nonobjection Permit	
	MCES Encroachment Permit	
	Industrial Permit (wastewater)	
U.S. Army Corps of Engineers	Wetland Letter of Permission or Permit (33 CFR 325)	
U.S. Fish and Wildlife Service	Section 7 ESA Consultation	

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

9. Land Use

a. Describe:

i. Existing land use of the site as well as areas adjacent to and near the site, including parks, trails, prime or unique farmlands.

Existing Land Use in the AUAR area has changed only slightly since the 2017 update. Roughly 100 acres of housing, industrial, commercial, and office development has been constructed in the last 5 years. These developments have occurred on land guided for these uses. Development that has occurred since the 2017 Update can be seen on Figure 7-1 and is described in Table 7-1.

There are several parks and trails within the AUAR area, none of which have been developed since 2017. There are no prime or unique farmlands within the AUAR area as the prior use was as a gravel mining area.

ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

The City adopted its 2040 Comprehensive Plan Update in March 2020, which provides updated future land use guidance for the GMA AUAR Area. Additionally, the City adopted the Gravel Mining Area Special Area Plan as a supplement to the Comprehensive Plan. The Future Land Use map for the GMA Area is serving as the maximum build-out scenario for this AUAR update and is shown in Figure 6-2.

Most of the undeveloped land within the Gravel Mining Area is within the eastern half of the AUAR area. The Comprehensive Plan provides separate guidance for the southern part of this area between I-94 and Elm Creek Boulevard and the area north of Elm Creek Boulevard. The guidance for each of these areas is summarized below. Figure 9-1 is from the City's Comprehensive Plan and shows the specific guidance for these areas.

Gravel Mining Area South

- Primary growth area will be south of Elm Creek Boulevard.
- Area along I-94 shall serve as a location for high quality, large format office and mixed-use buildings. The City of Maple Grove expects the tallest and highest quality buildings in the city to eventually be located in this area.
- Business park and offices are primary uses along Elm Creek Boulevard.
- Potential to incorporate highway commercial uses near US 169 and Elm Creek Boulevard Interchange.
- 169 & Elm Creek Blvd Interchange rebuild will be major infrastructure project.
- Small sites on western side adjacent to storm pond will need special consideration for appropriate uses.
- MnDOT site on the north side of Elm Creek Blvd could potentially accommodate some housing as the site is adjacent to future housing to the north.

Gravel Mining Area North

- Current uses as active gravel mine and auto auction are anticipated to continue for a number of years.
- Active redevelopment of gravel mining sites is likely many years, if not decades, in the future and additional planning work can commence when the timeframe to redevelopment becomes clearer.
- Mixed residential (detached, attached, and potentially multi-family) surround a neighborhood park on the west side.
- Mixed industrial/business park is on the east side.
- Well landscaped parkway would be used to buffer the uses.
- Industrial users would face parkway with loading docks and other similar features located away from the parkway.
- Continued active mining operations, including concrete recycling, wash plan operations, asphalt and concrete plants, and landscape material

operations will need to be reviewed with regard to long term land use and road alignments

Additionally, the City updated its Sanitary Sewer Plan, Local Surface Water Management Plan, and Local Water Supply Plan at the same time as the 2040 Comprehensive Plan Update. These plans are discussed as needed in question 11, Water Resources.

iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

No part of the AUAR area involves a shoreland zoning district, floodplain, wild and scenic river(s), critical areas, or agricultural preserves.

Parcels in the AUAR area are zoned for agriculture, residential use, planned unit development, business, industrial, and freeway frontages. See Figure 9-2 for the current GMA zoning map.

b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

Land Use and Zoning have been updated with the 2040 Comprehensive Plan, although the general guidance for the area to support a wide and complementary mixture of commercial, office, industrial, residential and public uses has remained since the 1990s. 'Arbor Lakes' represents the principal development today in the GMA. Through careful planning, portions of the area have evolved nearly exclusively from the gravel mining activities to an urban form. Properties adjoining the boundaries of the AUAR area are nearly all developed or are planned to be improved with commercial and industrial uses. The transition from these uses to the GMA existing uses is nearly seamless except for the 'stepping up' of architectural form and treatments, and transitions are expected to be the same for areas not yet developed. A porous transportation system, including pedestrian and vehicular movements, continues between the GMA and areas beyond. There are no potential conflicts involving environmental matters.

c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

There are no incompatibilities with land uses, zoning, and plans; the City is developing as per the 2040 Comprehensive Plan.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

10. Geologic Hazards and Soil Conditions

A review of the Hennepin County Geologic Atlas and well records from the Minnesota Well Index indicates apparent geologic hazards are expected to be encountered in the AUAR area. Depth to bedrock across the AUAR area averages 150 feet, with minimum depth to bedrock being 120 feet. The upper bedrock units across the AUAR area are either St. Peter Sandstone, Jordan Sandstone, St. Lawrence Shale, or Tunnel City Sandstone. The lack of carbonate bedrock reduces the risk of sinkhole formation or karst features. Based on a review of the Minnesota Department of Natural Resources (DNR) karst feature inventory database¹, no karst features are present within the AUAR area.

The sensitivity of groundwater aquifers to contamination is relatively high across the AUAR area, due to geologic deposits and soils that allow for rapid infiltration of water. The AUAR area falls within the wellhead protection Drinking Water Supply Management Area (DWSMA) for the City of Maple Grove, along with a portion of the DWSMA for the City of Brooklyn Park. The Wellhead Protection Plan for Maple Grove includes management strategies to reduce the risk of spills within this area and to address potential sources of contamination. Best management practices identified within the Wellhead Protection Plan should be utilized to prevent contamination of the soils and groundwater within the AUAR area.

As highly permeable geologic deposits are mined from the AUAR area, they are typically replaced with lower-permeability soils, thus adding greater protection to the underlying aquifers than was likely present before and during the mining activities. However, the AUAR area should still be treated as highly sensitive to contamination and spills, as highly permeable soils and shallow groundwater still exist within the AUAR area.

QUESTION 10 MITIGATION STRATEGIES UPDATE

No substantial changes to the mitigation measures are necessary since the 2017 Update. The City of Maple Grove's Wellhead Protection Plan amendment was most recently adopted in 2022, which determined that no significant changes were documented in the 2022 amendment compared to the 2012 Wellhead Protection Plan. Mitigation measures to avoid contaminating the aquifers should concentrate on spill prevention. This includes secondary containment for all storage tanks, along with leak detection devices. Stormwater infiltration should also be avoided in areas where stormwater may potentially pick up contaminants and rapidly infiltrate to groundwater aquifers.

11. Water Resources

a. Describe surface water and groundwater features on or near the site in a.i. and

¹ DNR. Karst Feature Inventory. Accessed January 2022.
<https://arcgis.dnr.state.mn.us/portal/apps/webappviewer/index.html?id=9df792d8f86546f2aafc98b3e31adb62>

a.ii. below.

- i. **Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.**

Currently, the surface waters of the site include one official wetland within the AUAR area, five wetlands within one mile, and ten stormwater ponds. Six impaired waters are within one mile of the AUAR area and are described in Table 11-1.

Table 11-1 Impaired Waters within One Mile of the AUAR area

Impaired Water	AUID*	Distance to Project Boundary	Impairment
Rice Lake/Elm Creek	27-0116-01/07010206-508	0.70 mile west	Aquatic Macroinvertebrate Bioassessments; Chloride; Dissolved Oxygen; Nutrient/Eutrophication Biological Indicators; Fish Bioassessments; E. coli
Fish Lake	27-0118-00	0.70 mile southwest	Mercury in Fish Tissue; Nutrient/Eutrophication Biological Indicators
Cedar Island Lake	27-0119-00	0.30 mile south	Nutrient/Eutrophication Biological Indicators
Eagle Lake	27-0111-01	0.23 mile south	Mercury in Fish Tissue; Nutrient/Eutrophication Biological Indicators
Shingle Creek (County Ditch 13)	07010206-506	0.77 mile east	Aquatic Macroinvertebrate Bioassessments; Chloride; Dissolved Oxygen; E. coli
Magda Lake	27-0065-00	0.89 mile southeast	Nutrients
Bass Creek	07010206-784	0.68 mile southeast	Benthic Macroinvertebrates bioassessments; Chloride; Fish Bioassessments

Source: MPCA 2022 Impaired Waters list

*Denotes Assessment Unit Identification (AUID)

Rice Lake and Elm Creek are located west of several main arterial roads and will not receive stormwater runoff from the AUAR area. Fish Lake, Cedar Island Lake, Eagle Lake, and Magda Lake are separated from the AUAR area by Highways 94 and 169 and will not receive stormwater runoff from the AUAR area. Stormwater as a result of gravel mining activities will be retained on-site. With development, stormwater is to be directed

to Shingle Creek within rates specified in the Stormwater Management Plan (1995). Shingle Creek connects to Bass Creek south of I-694.

Development in the GMA is not projected to affect any natural surface water features (e.g., wetlands). Any disruptions are permitted under the gravel mining use.

ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

No aquifers, springs or seeps were identified within the AUAR area.

- 1) Depth to groundwater:** Depth to groundwater within the AUAR area ranges from 0 feet to 20 feet. Shallow water table aquifers may be present if perched on low permeability sediments.
- 2) MDH wellhead protection area:** The AUAR area falls within the Maple Grove wellhead protection area and portions of the Brooklyn Park Central wellhead protection area.
- 3) The following wells were identified on the property:** All groundwater wells were identified in the 2017 Update. No new wells have been drilled since the 2017 Update.

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

The 2010 Update response projected ultimate wastewater flow from the AUAR area of 6.4 MGD. The 2017 Update determined that there was no substantial change in projected wastewater flow since the 2010 Update. As described in Item 9 (Land Use), existing land use has only changed slightly since the 2017 Update, consisting of approximately 100 acres of housing, industrial, commercial, and office development in the past five years.

1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

There is no change from the 2017 Update.

2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

There is no change from the 2017 Update.

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.**

There is no change from the 2017 Update.

MITIGATION STRATEGIES

The City of Maple Grove completed an update to the Comprehensive Sewer Plan (CSP) in November 2019 which considered future development within the AUAR area. As identified in the CSP, additional trunk lines are planned to be constructed in the northwest portion of the city to service undeveloped portions of the GMA. Sewer modeling completed as part of the CSP determined that development in the GMA would necessitate an additional trunk line at the I-94 crossing. The GMA adjacent to 77th Avenue (Elm Creek Boulevard) is planned to be served by a connection to the Brooklyn Park interceptor through a Metropolitan Council metering station (M228). This connection will require constructing a new sewer pipe under I-94, parallel to the existing 15-inch sewer. The remaining undeveloped areas of the GMA are anticipated to be served from the north and tie into the City's 85th Avenue connection to the Metropolitan Council interceptor system. Timing of the proposed trunk sewer will be driven by development in the GMA.

- ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.**

There is no change from the 2017 Update. The stormwater system has been partially built out in accordance with the 2017 Update. Future expansion of the system is proposed to be consistent with the 2017 Update.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

- iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.**

There are no changes for the 2017 Update. The City prepared an update to the Water Supply Plan (WSP) in October 2017. The WSP update determined that the population served grew at a slower rate than projected over the previous ten years and average daily demand has remained relatively flat. Planned municipal water wells would be installed within the City's existing wellfield in the drift aquifer. The WSP identifies three future well installations that would occur between 2020 and 2040 with a proposed pumping capacity of 2,500 gallons per minute (gpm). No other alternative water sources are anticipated to be required within the next ten years. Appropriations for the AUAR area have been determined to represent a relatively small part of the City's total water supply demand. No cases of well interference, and no impacts to surface resources have been observed. All development in the AUAR area to date is connected to public water supply.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

iv. Surface Waters

- a. Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.**

According to the National Wetland Inventory, (NWI) there are multiple aquatic resources primarily consisting of constructed stormwater ponds within the AUAR area. Eight NWI features within the AUAR area includes potential wetlands. No impacts are proposed to these naturally occurring wetlands; however, should impacts become required as a result of mining activities, the impacts would be covered under the gravel mining use.

It is anticipated that future development would be able to avoid impacting wetlands under the jurisdiction of the United States Army Corps of Engineers (USACE) and Wetland Conservation Act (WCA). If impacts cannot be avoided, both the USACE and WCA require that they be minimized to the greatest practicable extent and that alternatives be evaluated. In the event that impacts to wetland cannot be entirely avoided, a wetland replacement and mitigation plan would be required.

- b. Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the**

project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

Surface waters within the AUAR area consist of groundwater ponds or stormwater ponds. There are no proposed impacts to other surface waters as part of the proposed development scenarios.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

12. Contamination/Hazardous Materials/Wastes:

- a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.**

The MPCA's What's in My Neighborhood database was queried for a list of existing contamination or potential environmental hazards on or in close proximity to the AUAR area. The search results can be found in Figure 12-1 (MPCA WIMN Potentially Contaminated Sites). The potential to encounter contamination/potential environmental hazards, namely tank sites, has changed since the 2017 Update. Tank sites are detailed further in section 12c.

Mitigation strategies are discussed separately, at the end of question 12.

- b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.**

Under Update Alternative 2: GMA Maximum Development, there has been no change.

The 2017 Update estimated that each household will generate between 0.7 and 1.1 tons of trash per year. Commercially zoned areas were expected to generate 0.59 tons/employee/year and industrial zones to generate 1.49 tons/employee/year. It is projected that 50% of all solid waste in Hennepin County will come from residential households and that 50% from commercial and industrial zones. Forty-six percent of all solid waste is assumed to be recycled or composted. No changes in estimated solid waste from the 2017 Update are anticipated.

Recycling for commercial buildings, including businesses and restaurants in the AUAR area will be conducted in accordance with the 2016 Recycling Law (Minnesota

Statutes Chapter 115A, Section 115A.151). Recycling for multi-unit dwellings will have a recycling service in accordance with Minnesota Statutes Chapter 115A, Section 115A.552.

c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage.

No changes from the 2017 Update. Not applicable to an AUAR per EQB AUAR Guidance as no industrial uses are proposed.

Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

A search of the MPCA's What's in My Neighborhood (WIMN) database revealed the following tanks sites in the AUAR area in 2017:

- UPS - 8601 Valley Forge Lane: Active petroleum aboveground storage tanks (AST) and UST site TS0121776
- Hilger Transfer - 8550 Zachary Lane: Active petroleum AST and UST site TS0054940
- Great Lakes Engineering - 8984 Zachary: Active petroleum AST site TS0119648
- CS McCrossan Construction – 7865 Jefferson Hwy: Active ASTs sites TS0051787 and TS0052812
- Manheim Minneapolis Auto Auction - 8001 Jefferson Hwy: Active AST site TS0122076
- Ames Construction – CR 109: Active AST site TS0051996
- Chemstone Products – 11600 CR 109: Active AST and UST site TS0015051
- Anchor Block & Concrete – 12175 CR 109: Inactive AST site TS0054635
- Lunds & Byerly's – 12880 Elm Creek Blvd: Active AST site TS0121982
- Maple Grove Truck Station #90987 – 10900 77th Ave N: Active AST and UST site TS0002746
- Apple Valley Ready Mix – 10301 CR 109: Active AST site TS0055813

An updated search of the MPCA WIMN database in 2023 revealed the following additional tank sites in the AUAR area (MPCA 2022)²:

² MPCA. 2022. What's In My Neighborhood. Available at: <https://www.pca.state.mn.us/about-mPCA/whats-in-my-neighborhood>. Accessed January 2023.

- Costco Gasoline Loc No. 648 – 11330 Fountains Dr: Active UST site TS0124433
- Lowe's of Maple Grove 2627 – 11201 Fountains Dr: Active AST site TS0124864
- Aggregate Industries Maple Grove RM – 11000 77th Ave N: Active AST site TS0122753
- Aggregate Industries Maple Grove – 11590 CR 109: Active AST and UST site TS0054569
- Commercial Asphalt Co. Plant No. 904 – 10000 81st St N: Active AST site TS0051989

Select MPCA WIMN sites that were previously recorded in the AUAR area in 2017 also had additional tanks upon review in 2023:

- CS McCrossan Construction – 7865 Jefferson Hwy: Active AST site TS0052813
- Chemstone Products – 11600 CR 109: Active AST site TS0051219 and inactive UST site TS0002025
- Apple Valley Ready Mix – 10301 CR 109: Active AST site TS0131219

A review of the Minnesota Department of Agriculture (MDA) WIMN database was also conducted as part of the 2023 Update. No records were identified within the AUAR area, but one site is located just west of the AUAR area near Rosewood Court. This site was an unknown lawncare company (Case File No. PLK101000534) that contained fertilizer. An emergency investigation was conducted and closed in 2008. (MDA 2023)³.

Pursuant to the Wellhead Protection Plan, the City requires site plan review, tank inventory, and compliance with State and Federal laws for leak detection, secondary containment, and overfill protection. If soil contamination is discovered through due diligence testing or during the course of development, the developer or other responsible party will be required to appropriately mitigate the contaminants according to the type of development planned and in compliance with MPCA rules.

- d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.**

Construction wastes will be typical relative to the construction of utilities, roads, and commercial/industrial structures. Construction wastes will be primarily nonhazardous and can be managed as municipal solid waste (MSW) or construction/demolition debris. However, hazardous wastes in the form of used oils/lubricants, waste paints or other materials may be generated during construction. Through the development review

³ MDA. 2023. What's In My Neighborhood. Available at: [Welcome to What's In My Neighborhood? - Agricultural Interactive Mapping | Minnesota Department of Agriculture \(state.mn.us\)](https://www.mda.state.mn.us/what-in-my-neighborhood/). Accessed January 2023.

process, the City will require that all Minnesota Pollution Control Agency (MPCA) and other applicable regulatory requirements be met in the management and disposal of construction-related wastes. Recycling will be strongly encouraged, but this will be the responsibility of the developer and/or the construction contractor.

Hazardous waste is not anticipated to be generated during demolition, except for abatement and removal of regulated materials such as asbestos, refrigeration equipment, lights, and other regulated wastes if they are encountered. A pre-demolition Hazardous Materials Survey of the existing structures will be completed prior to the start of demolition activities. If any regulated materials such as asbestos-containing materials, and other regulated materials/wastes are present, an Abatement Plan will be prepared to address the removal and proper disposal of regulated materials identified in the Hazardous Materials Survey. Following abatement and demolition activities, a comprehensive Abatement Closeout Report should be prepared, which will document the removal, management, and disposal of the regulated materials.

Post-construction waste will be typical of commercial/industrial and residential land uses and would be primarily managed as MSW. Some limited volumes of hazardous wastes may be generated. Through the development review process, the City will require that all MPCA and other regulatory requirements be met.

MITIGATION STRATEGIES

At the time of development, the developer/contractor would be responsible for completing a Phase I Environmental Site Assessment (ESA) if warranted based on the project limits and proposed work. Based on the findings of the Phase I ESA, a Phase II investigation may be warranted. If it is anticipated that contamination may be encountered during construction, a Construction Contingency Plan (CCP) shall be prepared to address proper handling, treatment, storage, and disposal of solid wastes, hazardous materials, petroleum products, and other regulated materials/wastes that are used or generated during construction. The CCP would also establish protocols to minimize impacts to soil and groundwater in the event a release of hazardous substances or petroleum occurs during construction. Steps outlined in the CCP will also be implemented in the event that previously unknown hazardous substances or petroleum products (i.e., releases not identified in presently available reports) are encountered during construction activities.

Demolition and construction wastes shall either be recycled or disposed in the proper facilities. Manage MSW according to MPCA and other regulatory requirements.

In the event demolition is required, complete a pre-demolition Hazardous Building Materials Survey of the existing buildings in accordance with Minnesota Department of Health (MDH) and MPCA requirements prior to the start of demolition activities to determine if any regulated materials are present. A "Notification of Asbestos Related Work" must be submitted to MDH by a licensed asbestos inspector 10 working days prior to conducting abatement activities if thresholds are met. A "Notification of Intent to Perform a Demolition" must be submitted to the MPCA 10 working days prior to the start of demolition. Prepare an

Abatement Plan to address the removal and proper disposal of regulated materials identified in the Hazardous Building Materials Survey.

13. Fish, Plant Communities, and Sensitive Ecological Resources

a. Describe fish and wildlife resources as well as habitats and vegetation on or near the site.

No significant fish or wildlife resources were identified as affected in the 2017 Update because the permitted use was and has been for gravel mining. The majority of the AUAR area is currently developed residential or commercial property, and gravel mine. Limited habitat is available for use by wildlife. A detailed description of the land cover types within the AUAR area is provided in Question 7. The vegetative land cover present within the AUAR area (e.g., parks, open space, natural wetland, lakes, etc.) provides habitat for urban wildlife species, such as mice, rabbits, raccoons, and squirrels, among others.

The open water features within the AUAR area may provide suitable habitat for some aquatic species, including fish, frogs, and toads. However, it is anticipated that the open water supports a limited diversity of aquatic species due to the isolation of these features. The open water located within and near the AUAR area may contain suitable summer habitat and drinking sources for bat species.

b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-760) and/or correspondence number (ERDB) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.

Federally Listed Threatened and Endangered Species

A review of the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database⁴ was completed to generate an updated list of federally-protected species that may occur within the AUAR area. Based on this review, three species have the potential to occur within the AUAR area: the northern long-eared bat (NLEB), tricolored bat, and the monarch butterfly.

- Northern long-eared bat (*Myotis septentrionalis*) – Endangered
- Tricolored Bat (*Perimyotis subflavus*) – Proposed Endangered
- Monarch Butterfly (*Danaus plexippus*) - Candidate

⁴ USFWS. 2017c. Information for Planning and Conservation Database. <https://ecos.fws.gov/ipac/project/STKA5MGTNFCO7OUZLZUEXUN2O4/resources>. Website accessed January, 2023

Northern long-eared bat

Suitable roosting, forage, and travel habitat for the NLEB in the summer consists of a wide variety of forested and wooded habitats. While roosting, NLEB is generally found in deep crevices in areas such as forests and woodlots (i.e., live trees and/or snags greater than or equal to three inches diameter at breast height that have exfoliating bark, cracks, crevices, and/or cavities) as well as linear features such as fence rows, riparian forests, and other wooded corridors. NLEB roosts in both live trees or snags. (Sasse and Perkins 1996⁵; Foster and Kurta 1999⁶; Owen et al. 2003⁷). During winter months, NLEB hibernate in caves or abandoned mines (Foster and Kurta 1999)².

Present land use within the AUAR area is dominated by a mixture of residential, commercial, office and industrial uses, and gravel mining. Present land use within the future development portion of the AUAR area is primarily developed lands (combination of residential, regional mixed use, and office/warehouse/industrial). Isolated woodlands in the southeast corner of the AUAR area could provide limited potential summer habitat for the NLEB. Tree clearing and other construction activities will need to be determined before official determination for the NLEB can be made.

In 2017, the 4(d) Rule under the Endangered Species Act (ESA) was used to review impacts to NLEB. It was determined that the AUAR area, located in Hennepin County, fell within a white nose syndrome (WNS) buffer zone⁸. For areas within the WNS buffer zone, the incidental take (e.g., the harm, harassment or killing of a bat as a side effect of otherwise lawful actions, like tree clearing) from tree removal activities was not prohibited unless: 1) it resulted in removing a known occupied maternity roost tree, 2) if tree removal activities occurred within 150 feet of a known occupied maternity roost tree from June 1 through July 31, or 3) tree removal activities occurred within 0.25 mile of a hibernaculum at any time. Tree removal activities could then proceed without a permit and there was no need to contact the USFWS.

Per a 2023 search of the Minnesota Department of Natural Resources (DNR) Natural Heritage Information System (NHIS) database under license agreement LA-1005, there are no records of NLEB maternity roost trees or hibernaculum within the AUAR area or within a one-mile buffer. Additionally, the DNR and USFWS joint document that identifies maternity roost trees and hibernacula entrances in Minnesota indicated that there are no known

⁵ Sasse, D.B., and P.J. Pekins. 1996. Summer roosting ecology of northern long-eared bats (*Myotis septentrionalis*) in the White Mountain National Forest. Bats and forests symposium. British Columbia Ministry of Forests Working Paper 23:91-101.

⁶ Foster, R.W. and A. Kurta. 1999. Roosting ecology of the northern bat. (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). Journal of Mammalogy 80:659-672.

⁷ Owen et al. 2003. Homerange size and habitat use by the northern Myotis (*Myotis septentrionalis*). American Midland Naturalist 150: 352-359.

⁸ MDNR. 2020. White-nose Syndrome and Minnesota's Bats. Available at: <https://www.dnr.state.mn.us/wns/index.html>. Accessed January 2023.

maternity roost trees with 150 feet or know hibernacula entrances within 0.25 miles of the AUAR area⁹.

Notably, the 4(d) Rule of the ESA will be nullified on March 31, 2023 when the reclassification of the species from threatened to endangered goes into effect. The USFWS is developing tools that will need to be reviewed when available based on the presence of potential summer roosting habitat and tree clearing in the AUAR area.

Tricolored bat

During the non-hibernating seasons, tricolored bats will roost in live and dead leaf clusters of live or dead deciduous hardwood trees. Tricolored bats have also been observed roosting in artificial structures such as barns, bridges, roofs, and other concrete structures. During the winter, tricolored bats hibernate in caves and mines. If mines or caves are not present within the region, they have been observed hibernating in road-associated culverts, tree cavities, and abandoned water wells. (USFWS 2022)¹⁰. Isolated woodlands are located in the southeast corner of the study area which may provide suitable summer habitat for the tricolored bat. Tree clearing activities will need to be confirmed to determine the effects on the tricolored bat.

Monarch butterfly

The monarch butterfly is a migratory butterfly that exists in two main populations within the United States divided by the Rocky Mountains: the eastern population that overwinters in the mountains of Mexico, and the western population that overwinters along the southern pacific coast of California (United States Department of Agriculture [USDA] Forest Service undated)¹¹. This species generally occurs in areas with high densities of nectar sources, preferably native prairies with nectar species such as black-eyed Susan (*Rudbeckia hirta*), narrow-leaved coneflower (*Echinacea angustifolia*), and rough blazing star (*Lastris aspera*) that are utilized for feeding by adults (MDNR 2022)¹². However, the presence of milkweed (*Asclepias spp.*) is required for breeding habitat as it is the only plant on which the larvae can feed (National Wildlife Federation undated)¹³. Based on the lack of suitable habitat

⁹ MDNR and USFWS. 2021. Townships Containing Documented Northern Long-Eared Bat (NLEB) Maternity Roost Trees And/Or Hibernacula Entrances in Minnesota. Available at: http://files.dnr.state.mn.us/eco/ereview/minnesota_nleb_township_list_and_map.pdf. Accessed January 2023.

¹⁰ USFWS. 2022. Tricolored Bat (*Perimyotis subflavus*). U.S. Fish & Wildlife Service. Available: [Tricolored Bat \(Perimyotis subflavus\) | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/tricolored-bat). Accessed January 2023

¹¹ United States Department of Agriculture [USDA] Forest Service. undated. Migration and Overwintering. Available at: https://www.fs.fed.us/wildflowers/pollinators/Monarch_Butterfly/migration/. Accessed November 2021.

¹² MDNR. 2022. Butterfly Gardens. Available at: <https://www.dnr.state.mn.us/gardens/butterfly/index.html>. Accessed March 2022.

¹³ National Wildlife Federation. undated. Monarch Butterfly. Available at: <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Invertebrates/Monarch-Butterfly>. Accessed December 2021.

within the AUAR area such as milkweed and native prairie for the monarch butterfly, adverse effects are not anticipated for the monarch butterfly.

Migratory Birds

According to the USFWS IPaC, there are 10 migratory birds of concern with the potential to occur within the AUAR area.

Construction activities and development within the AUAR area have the potential to impact birds protected under the Migratory Bird Treaty Act (MBTA). The MBTA makes it illegal for anyone to take (i.e., to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations.

Under the MBTA, construction activities in grassland, roadsides, wetland, riparian (stream), shrubland, or woodland habitats that would otherwise result in the taking of migratory birds, eggs, young and/or active nests should be avoided. Although the provisions of the MBTA are applicable throughout the entire year, most migratory bird nesting activity in Minnesota occurs approximately from mid-March to August 15, per the MDNR¹⁴.

State-Listed Threatened and Endangered Species

Based upon a 2023 review of the MDNR NHIS under license agreement LA-1005, there are no known records of state-listed species within the AUAR area. The review indicated known records of two species within the AUAR area vicinity:

- Least darter (*Etheostoma microperca*) – There is one record of this species in the vicinity of the AUAR area, observed in Eagle Lake in September 2006. Eagle Lake is located outside of the AUAR area. This species is tracked and listed as a species of special concern in Minnesota; however, species of special concern are not protected by state regulations. Furthermore, while the AUAR area contains waterbodies that could potentially provide suitable habitat for this fish species, these waterbodies are not naturally occurring and instead a result of gravel mining and therefore most of them will be reclaimed.
- Pugnose shiner (*Notropis anogenus*) – This species is state-listed as threatened. Two records of this species, observed in July 1948 and September 2006, are located within Fish Lake and Eagle Lake, both of which are outside of the AUAR area. While the AUAR area contains waterbodies that could potentially provide suitable habitat for this fish species, these waterbodies are not naturally occurring and instead a result of gravel mining and therefore most of them will be reclaimed.

¹⁴ MDNR. 2014. Best Practices for Meeting DNR GP 2004-0001 (version 4, October 2014). http://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_chapter1.pdf.

These records were also recorded in the 2017 Update and no changes were identified in the 2023 review.

Because the development scenarios do not include alterations to waterbodies within the AUAR area, it is unlikely that either development scenario would directly impact the least darter or pugnose shiner. If required practices for stormwater and sediment control are followed during construction or development within the AUAR area, then there will be no effect on either fish species.

Per an analysis of NHIS data, there are no mapped high quality plant communities or MDNR-mapped Sites of Biodiversity Significance within the Project Area or the immediate vicinity. One lake of biological significance, Eagle Lake, and two regionally significant ecological areas (RSEAs) ranked as "high", one of which is associated with Cedar Island Lake, are located within a one-mile buffer of the AUAR area.

c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

Neither of the two development scenarios are anticipated to have a significant adverse effect on federally or state-listed threatened and endangered species in AUAR area.

The AUAR area may provide limited suitable summer habitat for the NLEB. Limited trees are present within the AUAR area primarily near the northwestern quadrant of the I-694/Highway 169 interchange and north of Elm Creek Boulevard near the intersection at Zachary Lane. Given the reclassification of the NLEB from threatened to endangered, the 4(d) Rule of the ESA will no longer apply to this species come March 31, 2023 when the reclassification goes into effect. The USFWS is developing new tools for NLEB consultation that will need to be reviewed once available based on the presence of potential summer roosting habitat and any tree clearing activities.

Urban wildlife may be impacted with the removal of woodland and dry grassland within the AUAR area; however, these habitat generalist species are typically adaptive to development activities and would likely relocate to undeveloped areas in the vicinity or continue to live in the remaining undeveloped areas within the AUAR area.

Construction activities in grassland, roadsides, shrubland, or woodland habitats within the AUAR area may result in the taking of migratory birds, eggs, young and/or active nests, if present. Although the provisions of the MBTA are applicable throughout the entire year, most migratory bird nesting activity in Minnesota occurs approximately from mid-March to August 15. When possible, removal of vegetation will occur outside of this timing window to minimize potential take of migratory birds, if present.

Construction activities that involve soil disturbance can result in the introduction and spread of invasive species. Minnesota statutes (Chapter 18) and local ordinances regulate management of noxious weeds and invasive species. Best management practices during

construction activities and operation within the AUAR area should be implemented to minimize the introduction or spread of noxious weeds and invasive species at the site.

d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

Limited wildlife habitat remains within the AUAR area, which is zoned for full development.

There are no records of NLEB maternity roost trees or hibernacula within the AUAR area or a one-mile buffer based on MDNR NHIS review. However, given the reclassification of the NLEB from threatened to endangered and the nullification of the 4(d) Rule of the ESA scheduled to go into effect on March 31, 2023, new guidance from the USFWS, when available, will need to be consulted in order to effectively avoid, minimize, or mitigate impacts to the NLEB.

When possible, removal of vegetation will occur outside of this timing window to minimize potential take of migratory birds, if present. If vegetation clearing cannot be avoided during the peak breeding season for migratory birds (approximately mid-March to August 15), a qualified biologist will conduct a pre-construction breeding bird survey within AUAR area to determine the absence or presence of breeding birds and their nests. Pre-construction breeding bird surveys may include:

1. Pre-construction surveys that occur no more than two weeks before tree and shrub clearing activities commence. The area surveyed will include the areas where potential suitable habitat has been identified and tree or shrub clearing has not been completed.
2. If an occupied nest is observed during the survey, tree and shrub clearing activities will not be permitted within a 0.12-mile buffer of the nest site during the breeding season or until the fledglings have left the area. Consult with the USFWS to avoid take of the species.

Upon completion, the survey results will be submitted to the USFWS, as appropriate. If breeding birds are not present, construction can proceed with no restrictions. If breeding birds or active nests are present, additional consultation will be required.

The results of the MDNR NHIS review are typically valid for one year. The NHIS database should be consulted prior to the commencement of construction activities within the AUAR area to identify any new records of rare or otherwise significant species, native plant communities, and other natural features within the AUAR area vicinity.

Best management practices and erosion and sediment control devices will be used during construction activities to prevent the flow of sediment into wetlands and open water within or adjacent to the AUAR area, which could result in adverse effects to water quality (e.g., turbidity) and aquatic species, if present.

MITIGATION STRATEGIES

As of 2023, the only update to mitigation strategies relates to the NLEB and the reclassification from threatened to endangered and the nullification of the 4(d) Rule of the ESA, both of which

are scheduled to go into effect on March 31, 2023. Once available, new tools from the USFWS should be reviewed to provide guidance for this species and how to mitigate any impacts.

Additionally, DNR requested mitigation strategies in the comment period. New developments are encouraged to use native plants and seed mixes in project landscaping and stormwater features in order to provide pollinator habitat. Native plants typically do not require the use of soil amendments, and do not need as much irrigation.

14. Historic Properties

The 2017 Update determined that there were no archaeological, historical, or architectural resources on or in proximity to the AUAR area and identified no impacts on any listed resources. There are no changes for the 2023 Update.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

15. Visual

The AUAR area is not located near any scenic views or vistas. The 2010 Update stated that a number of tall office buildings would likely be constructed and be visible some distance from the GMA. However, the 2017 Update concluded that, given the developed suburban environment of the area, this type of development would not have an adverse visual impact. There are no changes for the 2017 Update.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update.

16. Air

- a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.**

Stationary source emissions will not be produced by future development.

- a. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.**

As described in Item 18, since the 2017 Update, the projected number of trips generated by development within the GMA has been reduced by 82,463 daily trips. The 2023 Update projected 191,000 trips per day would be generated under the GMA Maximum Development Scenario, compared to the 2017 Update which projected 273,392 trips per day. This reduction is primarily associated in the planned shopping center within Area A changing to various commercial and office uses, and improved data from ITE in calculating traffic generation for specific uses.

Motorized vehicles affect air quality by emitting air borne pollutants. The changes in traffic volumes, travel patterns, and roadway locations resulting from either development scenario could affect air quality by changing the number of vehicles and the congestion levels in the AUAR area. The air quality impacts from the development scenarios will be analyzed by addressing criteria pollutants, a group of common air pollutants regulated by the EPA on the basis of criteria (information on health and/or environmental effects of pollution). The criteria pollutants identified by the EPA are ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Potential impacts resulting from these pollutants are assessed by comparing projected concentrations to National Ambient Air Quality Standards (NAAQS).

In addition to the criteria air pollutants, the EPA also regulates air toxics. The Federal Highway Administration (FHWA) provides guidance for the assessment of Mobile Source Air Toxic (MSAT) effects for transportation projects in the National Environmental Policy Act (NEPA) process. A qualitative evaluation of MSATs has been performed for this AUAR, the scope and methods of which have been developed in collaboration with MnDOT and the MPCA.

National Ambient Air Quality Standards (NAAQS) – Criteria Pollutants

Ozone

Ground-level ozone is a primary constituent of smog and is a pollution problem throughout many areas of the United States. Exposures to ozone can cause people to be more susceptible to respiratory infection, resulting in lung inflammation, and aggravating respiratory diseases, such as asthma. Ozone is not emitted directly from vehicles but is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in the presence of sunlight. Transportation sources emit NOx and VOCs and can, therefore, affect ozone concentrations. However, due to the phenomenon of atmospheric formation of ozone from chemical precursors, concentrations are not expected to be elevated near a particular roadway.

The MPCA, in cooperation with various other agencies, industries, and groups, has encouraged voluntary control measures for ozone and has begun developing a regional ozone modeling effort. Ozone concentrations in the lower atmosphere are influenced by a complex relationship of precursor concentrations, meteorological conditions, and

regional influences on background concentrations. MPCA states in *The air we breathe: The state of Minnesota's air quality | 2019*¹⁵ that:

Ozone and fine-particle levels in Minnesota have been improving since 2003. However, progress in reducing both pollutants has been affected by year-to-year variability in the weather. Moreover, climate change may cause future challenges, both from increased local temperatures causing more ozone to form, and from longer and more frequent droughts resulting in more fine-particle pollution from wildfires.

As all areas of the state currently meet the national health-based standards for ozone levels, this project is exempt from performing further ozone analyses.

Particulate Matter

Particulate matter (PM) is the term for particles and liquid droplets suspended in the air. Particles come in a wide variety of sizes and have been historically assessed based on size, typically measured by the diameter of the particle in micrometers. PM_{2.5}, or fine particulate matter, refers to particles that are 2.5 micrometers or less in diameter. PM₁₀ refers to particulate matter that is 10 micrometers or less in diameter.

Motor vehicles (i.e., cars, trucks, and buses) emit direct PM from their tailpipes, as well as from normal brake and tire wear. Vehicle dust from paved and unpaved roads may be re-entrained, or re-suspended, in the atmosphere. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur dioxide, nitrogen oxides, and volatile organic compounds. PM_{2.5} can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including¹⁶:

- Premature death in people with heart or lung disease;
- Nonfatal heart attacks;
- Irregular heartbeat;
- Aggravated asthma;
- Decreased lung function; and,
- Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing.

On January 6, 2023, the EPA issued a proposed rule revising the annual health NAAQS for fine particles (PM_{2.5}). The rule can be found in 40 CFR Parts 50, 53 and 58 of the Federal Register¹⁷: The EPA website states¹⁸:

¹⁵ Source: <https://www.pca.state.mn.us/sites/default/files/lraq-1sy19.pdf>

¹⁶ Source: <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>

¹⁷ Source: [2023-00269.pdf \(govinfo.gov\)](https://www.epa.gov/2023-00269.pdf)

¹⁸ Source: [National Ambient Air Quality Standards \(NAAQS\) for PM | US EPA](https://www.epa.gov/national-ambient-air-quality-standards)

On January 6, 2023, after carefully reviewing the most recent available scientific evidence and technical information, and consulting with the Agency's independent scientific advisors, EPA announced its proposed decision to revise the primary (health-based) annual PM_{2.5} standard from its current level of 12.0 µg/m³ to within the range of 9.0 to 10.0 µg/m³. EPA also proposed not to change the current:

- secondary (welfare-based) annual PM_{2.5} standard,
- primary and secondary 24-hour PM_{2.5} standards, and
- primary and secondary PM₁₀ standards.

In addition, EPA proposed revisions to other key aspects related to the PM NAAQS, including revisions to the Air Quality Index (AQI) and monitoring requirements.

The Clean Air Act conformity requirements include the assessment of localized air quality impacts of federally-funded or federally-approved transportation projects that are located within PM_{2.5} nonattainment and maintenance areas and deemed to be projects of air quality concern. The AUAR area is located in an area that has been designated as an unclassifiable/attainment area for PM. This means that the AUAR area has been identified as a geographic area that meets the national health-based standards for PM levels, and therefore is exempt from performing PM analyses.

Nitrogen Dioxide (Nitrogen Oxides)

Nitrogen oxides, or NO_x, are the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary sources of NO_x are motor vehicles, electric utilities, and off-road equipment. The MPCA's website¹⁹ indicates that:

On its own, nitrogen dioxide can cause lung irritation and diminish immune responses to respiratory infections. Individuals with pre-existing conditions, especially asthma, as well as young children and the elderly, are particularly susceptible. Exposure can cause coughing, wheezing, or difficulty breathing, and can send affected individuals to the hospital. Secondary pollutants formed with nitrogen dioxide — including ozone and particulate matter — also have negative health impacts.

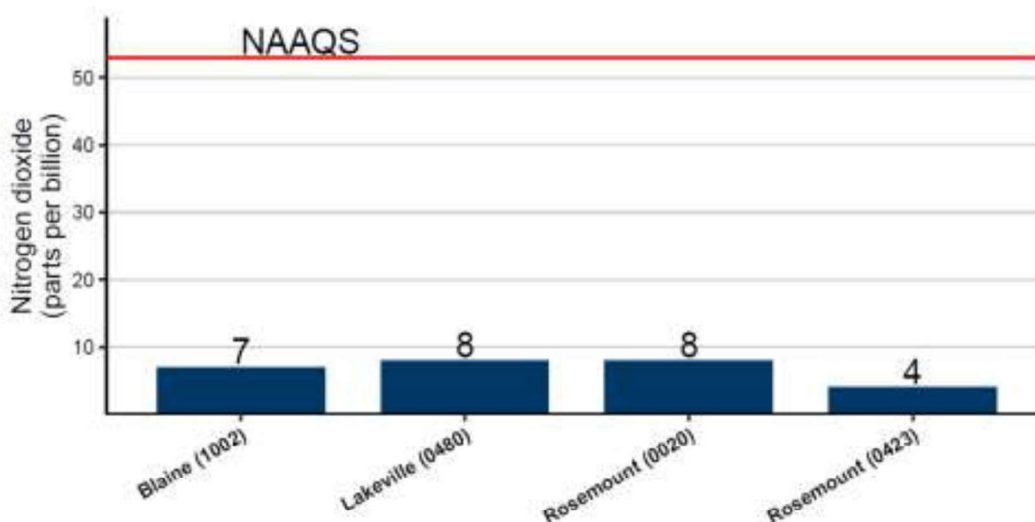
Nitrogen dioxide (NO₂), which is a form of nitrogen oxide (NO_x), is regularly monitored. Minnesota currently meets federal nitrogen dioxide standards, according to the 2021 Annual Air Monitoring Network Plan²⁰. A monitoring site meets the annual NAAQS for NO₂ if the annual average is less than or equal to 53 parts per billion (ppb). As shown in Chart 16-

¹⁹ Source: <https://www.pca.state.mn.us/pollutants-and-contaminants/nitrogen-dioxide>

²⁰ Source: <https://www.pca.state.mn.us/sites/default/files/aq10-18a.pdf>

1, the 2019 Minnesota NO₂ monitoring site averages ranged from 4 ppb to 8 ppb; therefore, Minnesota currently meets the annual NAAQS for NO₂.

Chart 16-1: Annual Average NO₂ Concentrations Compared to the NAAQS



The EPA's December 1999 regulatory announcement, EPA420-F-99-051²¹, describes the Tier 2 standards for tailpipe emissions, and states:

The new tailpipe standards are set at an average standard of 0.07 grams per mile for nitrogen oxides for all classes of passenger vehicles beginning in 2004. This includes all light-duty trucks, as well as the largest SUVs. Vehicles weighing less than 6000 pounds will be phased-in to this standard between 2004 and 2007.

As newer, cleaner cars enter the national fleet, the new tailpipe standards will significantly reduce emissions of nitrogen oxides from vehicles by about 74 percent by 2030. The standards also will reduce emissions by more than 2 million tons per year by 2020 and nearly 3 million tons annually by 2030.

In the 2021 Annual Air Monitoring Network Plan for Minnesota²², it states the following with regard to the 1-hour NO₂ standard:

On January 22, 2010, the EPA finalized revisions to the NO₂ NAAQS. As part of the standard review process, the EPA retained the existing annual NO₂

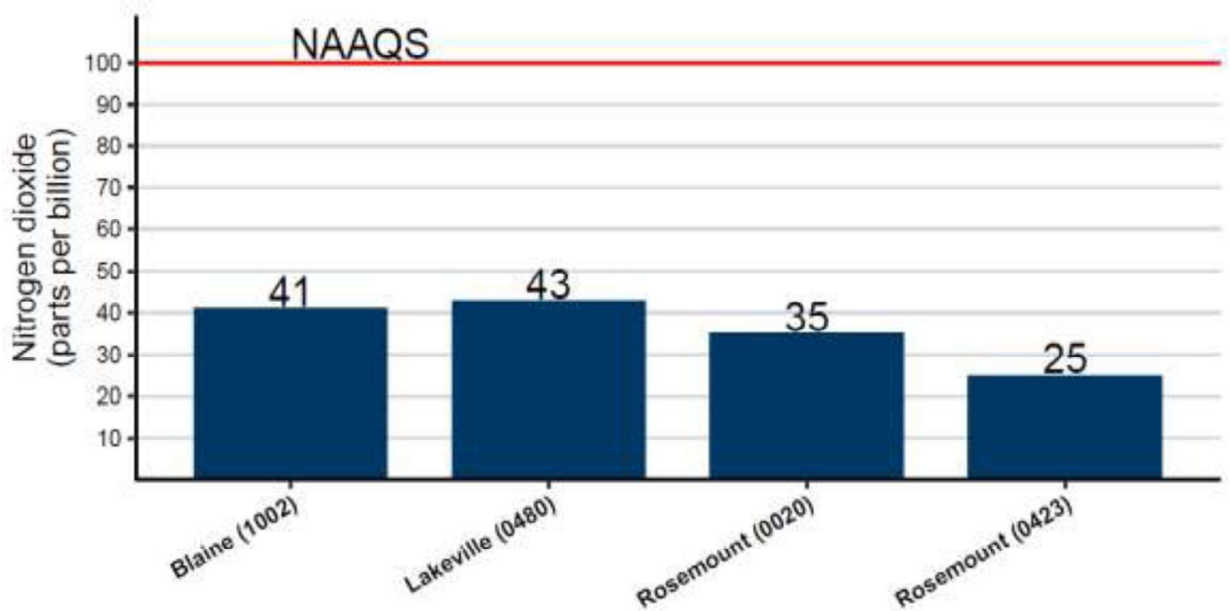
²¹ Source: <https://www3.epa.gov/tier2/documents/f99051.pdf>

²² Source: <https://www.pca.state.mn.us/sites/default/files/aq10-18a.pdf>

NAAQS, but also created an additional one-hour standard. The new one-hour NAAQS is intended to protect against adverse health effects associated with short-term exposures to elevated NO₂. To meet this standard, the three-year average of the annual 98th percentile daily maximum one-hour NO₂ concentration must not exceed 100 ppb. Minnesota averages ranged from 25 ppb at Rosemount (0423) to 43 ppb at the Lakeville near-road site (0480); therefore, all Minnesota sites currently meet the one-hour NAAQS for NO₂.

As shown in Chart 16-2, the 2019 Minnesota NO₂ monitoring site averages ranged from 25 ppb to 41 ppb; therefore, Minnesota currently meets the annual NAAQS for NO₂.

Chart 16-2: 1-Hour NO₂ Concentrations Compared to the NAAQS



Within the AUAR area, it is unlikely that NO₂ standards will be approached or exceeded based on the relatively low ambient concentrations of NO₂ in Minnesota and on the long-term trend toward reduction of NO_x emissions. Because of these factors, a specific analysis of NO₂ was not conducted for this project.

Sulfur Dioxide

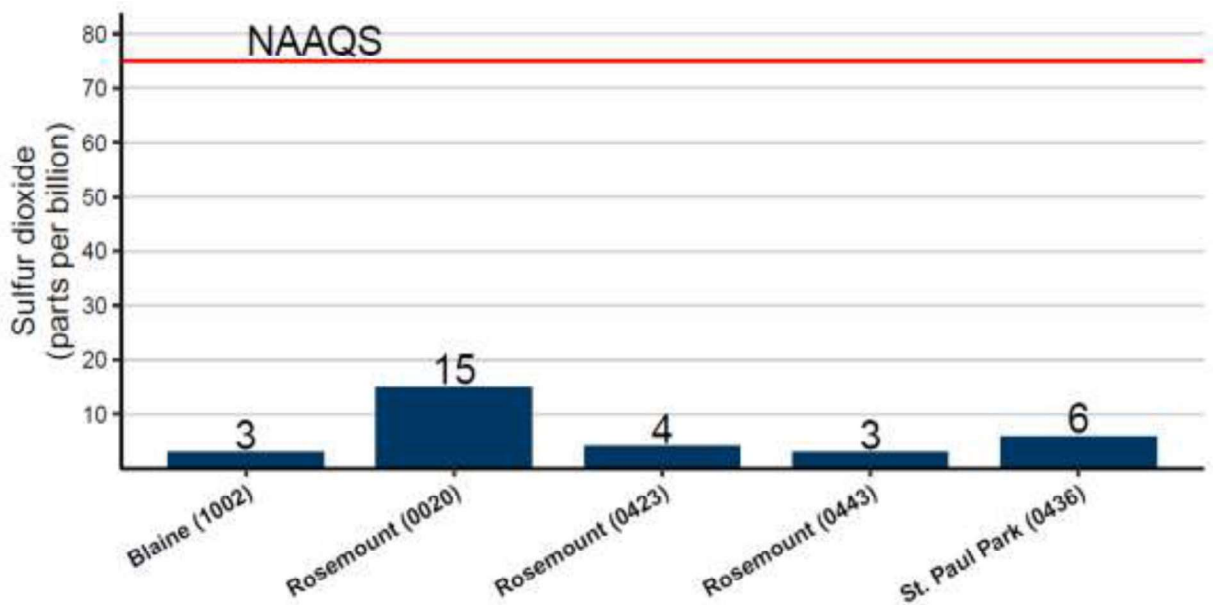
Sulfur dioxide (SO₂) and other sulfur oxide gases (SO_x) are formed when fuel containing sulfur, such as coal, oil, and diesel fuel is burned. Sulfur dioxide is a heavy, pungent, colorless gas. Elevated levels can impair breathing, lead to other respiratory symptoms, and at very high levels aggravate heart disease. People with asthma are most at risk when SO₂ levels increase. Once emitted into the atmosphere, SO₂ can be further oxidized to sulfuric acid, a component of acid rain. Emissions of sulfur oxides from transportation sources are a small component of overall emissions and continue to decline due to the desulfurization of fuels.

In the 2021 Annual Air Monitoring Network Plan for Minnesota²³, it states the following with regard to SO₂:

On June 2, 2010, the EPA finalized revisions to the primary SO₂ NAAQS. EPA established a new one-hour standard, which is met if the three-year average of the annual 99th percentile daily maximum one-hour SO₂ concentration is less than 75 ppb. Minnesota averages from 2017-2019 ranged from 3 ppb at Rosemount (0443) and Blaine (1002) to 15 ppb at Rosemount (0020); therefore, all Minnesota sites currently meet the one-hour NAAQS for SO₂.

Because of these factors, an analysis for sulfur dioxide was not conducted for this project.

Chart 16-3: 1-Hour SO₂ Concentrations Compared to the NAAQS



Lead

Due to the phase out of leaded gasoline, lead is no longer a pollutant associated with vehicular emissions.

Carbon Monoxide

The AUAR area is not located within a CO maintenance or nonattainment area. Future development is expected to generate increased vehicular traffic, which will result in a relatively small increase in CO emissions and other vehicle related emissions. The EPA has approved a CO hot spot screening method designed to identify intersections that may

²³ Source: <https://www.pca.state.mn.us/sites/default/files/aq10-18a.pdf>

result in CO emissions that exceed air quality standards. This screening method assumes that intersections with a total daily traffic volume exceeding 82,300 vehicles per day may result in potential CO impacts that exceed air quality standards. An update to the traffic impact study was completed for the AUAR, which is discussed in Item 20. Based on this study, intersections within the study area would not generate traffic exceeding 82,300 vehicles per day. Therefore, it is not anticipated that vehicle emissions generated by the maximum develop scenario would have the potential to significantly impact CO air pollution.

Mobile Source Air Toxics

In addition to the criteria air pollutants, the EPA also regulates air toxics. The Federal Highway Administration (FHWA) provides guidance for the assessment of Mobile Source Air Toxic (MSAT) effects for transportation projects. A qualitative evaluation of MSATs has been performed for the AUAR, the scope and methods of which have been developed in collaboration with MnDOT, MPCA, and FHWA.

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA assessed this expansive list in its rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are part of EPA's Integrated Risk Information System (IRIS).²⁴ In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA).²⁵ These are *1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter*. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

Motor Vehicle Emissions Simulator (MOVES)

According to EPA, MOVES2014 is a major revision to MOVES2010 and improves upon it in many respects. MOVES2014 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2010. These new emissions data are for light- and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES2014 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. MOVES2014 incorporates the effects of three new Federal emissions standard rules not included in MOVES2010. These new standards are all expected to impact MSAT emissions and include Tier 3 emissions and fuel standards starting in 2017 (79 FR 60344), heavy-duty greenhouse gas regulations that phase in during model years 2014-2018 (79 FR 60344), and the second phase of light duty greenhouse gas regulations that phase in during model years 2017-2025 (79 FR 60344). Since the release of

²⁴ <https://www.epa.gov/iris>

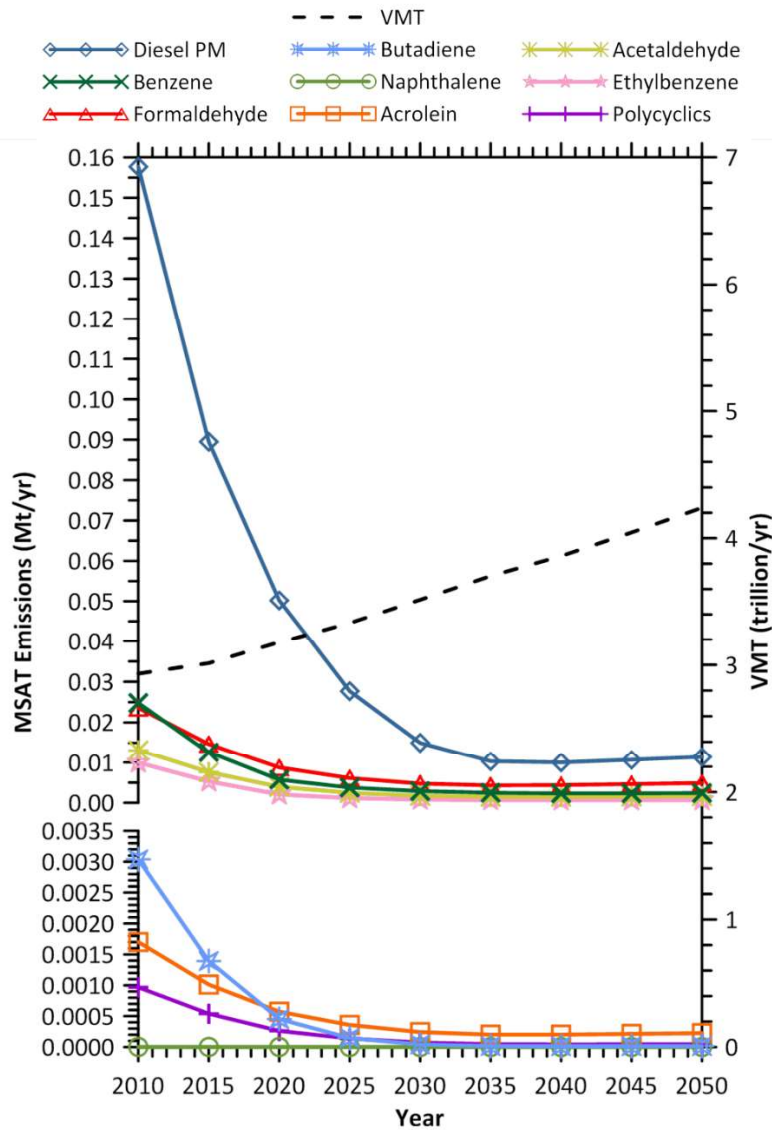
²⁵ <https://www.epa.gov/national-air-toxics-assessment>

MOVES2014, EPA has released MOVES2014a. In the November 2015 MOVES2014a Questions and Answers Guide,²⁶ EPA states that for on-road emissions, MOVES2014a adds new options requested by users for the input of local VMT, includes minor updates to the default fuel tables, and corrects an error in MOVES2014 brake wear emissions. The change in brake wear emissions results in small decreases in PM emissions, while emissions for other criteria pollutants remain essentially the same as MOVES2014.

Using EPA's MOVES2014a model, as shown in Exhibit 5, FHWA estimates that even if VMT increases by 45 percent from 2010 to 2050 as forecast, a combined reduction of 91 percent in the total annual emissions for the priority MSAT is projected for the same time period.

²⁶ EPA. MOVES2014a Questions and Answers Guide. November 2015.
<https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockkey=P100NNR0.txt>

Chart 16-4:
FHWA Projected National MSAT Emission Trends 2010 – 2050
For Vehicles Operating on Roadways using EPA's MOVES2014a MODEL



Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors

Source: EPA MOVES2014a model runs conducted by FHWA, September 2016.

Diesel PM is the dominant component of MSAT emissions, making up 50 to 70 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES2014a

will notice some differences in emissions compared with MOVES2010b. MOVES2014a is based on updated data on some emissions and pollutant processes compared to MOVES2010b, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES2014a emissions forecasts are based on lower VMT projections than MOVES2010b, consistent with recent trends suggesting reduced nationwide VMT growth compared to historical trends.

Qualitative MSAT Analysis

For either development scenario in this AUAR, the amount of MSAT emitted would be proportional to the average daily traffic, or ADT, assuming that other variables such as fleet mix are the same.

The ADT estimated for either build scenario is higher than that for the No Build condition, because of the additional activity associated with the proposed development. This increase in ADT would lead to higher MSAT emissions in the vicinity of the AUAR area. The higher emissions could be offset somewhat by a decrease in regional traffic due to increased use of transit. The extent to which these emissions decreases will offset vehicle related emissions increases is not known.

However, regardless of which scenario is chosen, emissions will likely be lower than present levels in the design year as a result of EPA regulations for vehicle engines and fuels, which are expected to cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOVES2014 model forecasts a combined reduction of over 90 percent in the total annual emissions rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45 percent (Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016). This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project. Local conditions may differ from these national projections in terms of fleet mix and turnover, ADT growth rates, and local control measures. However, the EPA-projected reductions are so significant (even after accounting for ADT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional activity contemplated as part of the project scenarios could have the effect of increasing emissions in the vicinity of nearby homes and businesses; therefore, under the Build scenario there may be localized areas where ambient concentrations of MSATs would be higher than under the No Build conditions. However, as discussed above, the magnitude and the duration of these potential differences cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific health impacts. Even though there may be differences among the scenarios, on a region-wide basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that in almost all cases the MSAT levels in the future will be significantly lower than today.

In conclusion, the Build scenario for the project is expected to be associated with higher levels of MSAT emissions in the study area, relative to the No Build condition, along with

some benefit from mode shifts to transit. There also could be slightly higher differences in MSAT levels in a few localized areas where activity occurs closer to homes, and businesses. Under all scenarios, MSAT levels are likely to decrease over time due to nationally mandated cleaner vehicles and fuels.

The results of the analysis demonstrate that concentrations of CO in the AUAR area would be substantially below the state and federal standards, and that no exceedances are anticipated due to additional traffic generated by the proposed development.

Potential Impacts

The increase in traffic associated with new development was considered in a qualitative evaluation of MSATs. The increased traffic could lead to higher MSAT emissions near the AUAR area. Therefore, under both Development Scenarios there may be localized areas where ambient concentrations of MSATs would be higher than under existing conditions. However, the magnitude and duration of these potential differences cannot be reliably quantified, due to incomplete or unavailable information in forecasting project-specific health impacts. On a region-wide basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will cause substantial reductions over time that in almost all cases the MSAT levels in the future will be significantly lower than today.

MITIGATION STRATEGIES

- The qualitative analysis contained in this section demonstrates there will be no anticipated exceedances of air pollutant concentrations resulting from the proposed project; therefore, no mitigation measures are necessary. The State of Minnesota does not require permits for traffic-related emissions for projects of this type. This analysis also demonstrates that no exceedances are anticipated under the construction phase. However, a series of Best Management Practices (BMPs) would be implemented during construction to control dust. This may include the following preventive and mitigative measures:
 - Minimization of land disturbance during site preparation
 - Use of watering trucks to minimize dust
 - Covering of trucks while hauling soil/debris off-site or transferring materials
 - Stabilization of dirt piles if they are not removed immediately
 - Use of dust suppressants on unpaved areas
 - Minimization of unnecessary vehicle and machinery idling
- Pursuant to Minnesota Rules 4410.3610, Subpart 1, several heavy industrial uses are not allowed to utilize the AUAR process to satisfy the mandatory environmental review for many. These include the uses exceeding mandatory EAW thresholds per Minnesota Rules 4410.4300, subparts 2 to 13, 15 to 17, 18 (item C, D, or E), or 24; and mandatory Environmental Impact Statement (EIS) thresholds per 4410.4400, subparts 2 to 10, 12, 13, or 25. For many of these uses, the Minnesota Rules assign an RGU other than the local governmental unit. If any of these uses are proposed within the AUAR area, they would be subject to the completion of the appropriate environmental review, conducted by the RGU listed in the rules.

- b. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

The full buildout scenario would not generate substantial odors during construction. Potential odors would include exhaust from diesel engines and fuel storage. Dust generated during construction will be minimized through standard dust control measures such as applying water to exposed soils and limiting the extent and duration of exposed soil conditions. Construction contractors will be required to control dust and other airborne particulates in accordance with MnDOT specifications. After construction is complete, dust levels are anticipated to be minimal because all soil surfaces exposed during construction would be in permanent cover (i.e., paved or revegetated areas).

MITIGATION STRATEGIES

The qualitative analysis contained in this section demonstrates there will be no anticipated exceedances of air pollutant concentrations resulting from the proposed project; therefore, no mitigation measures are necessary. The State of Minnesota does not require permits for traffic-related emissions for projects of this type. This analysis also demonstrates that no exceedances are anticipated under the construction phase. However, a series of Best Management Practices (BMPs) would be implemented during construction to control dust. This may include the following preventive and mitigative measures:

- Minimization of land disturbance during site preparation
- Use of watering trucks to minimize dust
- Covering of trucks while hauling soil/debris off-site or transferring materials
- Stabilization of dirt piles if they are not removed immediately
- Use of dust suppressants on unpaved areas (DNR recommends limiting the use of these products within Wellhead Protection Areas)
- Minimization of unnecessary vehicle and machinery idling

17. Noise

As stated in the AUAR guidelines, construction noise need not be addressed unless there is some unusual reason to do so. No unusual circumstances have been identified that would necessitate a detailed noise analysis.

Minnesota Rules Chapter 7030 provides the Minnesota standards for noise. These standards describe the limiting levels of sound established on the basis of present knowledge for the preservation of health and welfare. These standards are designed to be consistent with sleep, speech, annoyance, and hearing conservation requirements for receivers within areas grouped according to land use activities. The Minnesota standards are as follows:

Table 17-1: Minnesota Pollution Control Agency State Noise Standards

Land Use	Code	Day (7:00 a.m. - 10:00 p.m.) dBA		Night (10:00 p.m. - 7:00 a.m.) dBA	
Residential	NAC-1	L10 of 65	L50 of 60	L10 of 55	L50 of 50
Commercial	NAC-2	L10 of 70	L50 of 65	L10 of 70	L50 of 65
Industrial	NAC-3	L10 of 80	L50 of 75	L10 of 80	L50 of 75
Notes:					
1. NAC-1 includes household units, transient lodging and hotels, educational, religious, cultural entertainment, camping and picnicking land uses.					
2. NAC-2 includes retail and restaurants, transportation terminals, professional offices, parks, recreational and amusement land uses.					
3. NAC-3 includes industrial, manufacturing, transportation facilities (except terminals), and utilities land uses.					
4. From Minnesota Pollution Control Agency, Minn. Rules sec. 7030.0040					

L10 means the sound level which is exceeded for 10 percent of the time for a one-hour period. L50 means the sound level that is exceeded 50 percent of the time for a one-hour period. Sound levels are expressed in dBA. A dBA is a unit of sound level expressed in decibels and weighted for the purpose of approximating the human response to sound.

Minnesota Statutes, Section 116.07, Subd. 2a, exempt noise from local and county roads from the requirements of these noise rules unless full control of access to the road has been acquired. This statute exempts noise from all roadways in the AUAR area.

MITIGATION STRATEGIES

There is no change to mitigation strategies since the 2017 Update. Any developer and the City will ensure that noise levels meet the appropriate Noise Area Classification standards post-construction, and that appropriate mitigation actions are taken, if necessary.

- The AUAR study area will be developed such that where feasible, land use activities sensitive to noise will be suitably set back from existing noise sources such that the potential for noise impact is sufficiently reduced. These details will be determined as each project development proceeds. Once a project is further defined, setback distances from the roadway network within the AUAR area will be reviewed relative to the receptors listed in the above section to determine the potential for a project to exceed State noise standards.
- If needed, a noise analysis will be conducted to model the existing and build condition near the AUAR area. The traffic modeling will be completed using the most current approved FHWA Traffic Noise Model (TNM) in accordance with MnDOT's noise guidance and requirements in place at that time. Prior to beginning the noise analysis, the City will meet with MPCA staff to discuss the proposed traffic noise analysis methodology to ensure that State Standards will be met. Daytime noise monitoring will be conducted at predetermined locations on the project site. A build condition noise model will be developed for specified locations on the project site and be compared to State daytime and nighttime noise standards. If State standards are exceeded, an analysis of proposed noise barriers will be prepared according to MnDOT guidance.

- The City should work with the MPCA and MnDOT during project development and planning, as needed, to ensure that road noise setbacks are appropriate. Noise modeling is an effective way to plan land use and development, but the state noise standards are based solely on monitored noise. Thus, conducting noise monitoring, in addition to modeling, would best ensure compliance with state noise standards, especially in areas where proposals include residential development.
- Where feasible, equipment used for any future construction-related activities should be fitted with the appropriate mufflers.

18. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.**

1. No more parking anticipated since 2017 AUAR Update was completed.
2. 2023 Update GMA Maximum Development- 191,000 trips/day.
3. 2023 Update GMA Maximum Development – 19,725 trips/day at peak times of 7am-8am and 5pm-6pm. Trip generation results for each GMA area can be seen in Table 18-1. Designated GMA areas are shown on Figure 6-1.

Table 18-1: Trips Generated by GMA – 2017 Update Alternatives 1 and 2 and GMA 2010 Update Alternative 2

Area	Use	2023 Update GMA Maximum Development		2017 Update Alternative 2 GMA Maximum Development	
		Daily Trips	Peak Hour Trips	Daily Trips	Peak Hour Trips
A	Commercial	5,070	466	33,600	3,024
	Office	5,347	710	39,082	4,382
	Industrial	12,590	1,601	-	-
B	Commercial	35,356	3,227	40,133	4,191
	Office	533	67	540	72
C	Commercial	28,794	2,681	33,664	3,283
	Public Facilities	3,589	509	4,163	657
D	Commercial	19,593	1,899	22,598	2,201
	Office	8,157	893	13,005	1,941
	Residential	7,024	568	8,490	843
	Public Facilities	43	6	126	33
E	Commercial	-	-	2,781	256
	Residential	5,412	483	4,543	453
	Public Facilities	3	0	8	2
F	Office	894	119	909	129
	Residential	4,843	443	4,323	434
	Industrial	548	73	785	122
	Public Facilities	16	2	50	13
G	Commercial	445	41	235	20
	Industrial	4,736	602	6,821	926
H	Industrial	6,922	924	11,249	1,462
I	Commercial	7,738	733	2,310	213
	Office	952	126	4,031	403
	Public Facilities	12	2	51	13
	Residential	9,943	795	10,748	1,075
J	Office	2,933	390	3,622	362
	Residential	1,385	105	2,838	284
	Industrial	3,303	441	2,877	374
K	Industrial	2,500	310	3,500	448
L	Commercial	3,021	278	3,429	316
	Office	1,156	154	1,280	128
	Industrial	8,071	1,077	11,601	1,508
Grand Total		190,929	19,725	273,392	29,569

4. In 2021, the Institute for Traffic Engineers released the 11th Edition of Trip Generation. Trip generation rates for the land use categories in the GMA changed slightly in this new edition. These new rates were used in the latest calculations.

5. No change since 2017 AUAR Update.

- b. Discuss the effect on traffic congestion on affected roads, and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceed 2,500, a traffic impact study must be prepared as a part of the EAW. Use**

the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 or a similar local guidance.

Since the 2017 Update, there has been a reduction in daily trips of 82,463 trips. This number results in a lower overall daily trip number than was originally estimated for GMA Maximum Development. The major contributors to this reduction are:

- In Area A, the planned shopping center is now planned for various commercial and office uses, reducing anticipated traffic generation.
- Reductions were also seen in most other areas. In many cases these reductions are related to better data from ITE in calculating traffic generation for specific uses.

c. Identify measures that will be taken to minimize or mitigate project-related transportation effects.

In addition to measures discussed in the 2017 Update, the Maple Grove Transit Station has been built just west of Hemlock Lane on Main Street. Currently, the transit station services three bus routes that have stops in the GMA Area:

- 781 – Express route from Maple Grove Transit Center to Downtown Minneapolis
- 784 - Express route from Maple Grove Transit Center to Downtown Minneapolis (different downtown stops than 781 route)
- 789 – Express route from Maple Grove Transit Center to the University of Minnesota with stops on the west and east banks of campus.

Plans are being explored to expand the Blue Line LRT north of Minneapolis. The existing layout of the tracks do not extend into the GMA but will be just east of USTH 169 along Broadway Avenue. Stations are not yet planned. Feeder connections between the AUAR area and the Blue Line may be considered.

19. Cumulative Potential Effects

Cumulative potential effects are addressed throughout the AUAR as the AUAR reviews the potential impacts of development scenarios that will include multiple projects that will develop over approximately fifteen years. The response to this question specifically addresses reasonably foreseeable projects that may interact with development in the AUAR area.

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

The geographic scale of potential effects is assumed to be a one-mile radius of the AUAR area. The timeframe for full build-out of development in the GMA depends on how fast land is mined for aggregate and when developers want to construct projects. As to mining, how much and what land becomes available depends on both the market for aggregates and sequencing of mining. The market for aggregate is tied to the general economy. The

sequence of gravel mining responds to the natural randomness in location of varying raw aggregate products.

- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.**

There are no changes since the 2017 Update.

- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.**

The City presented mitigation measures necessary to address the cumulative impacts of developments within the GMA boundaries and past, present, and reasonable future projects outside the GMA in appropriate items in the 2010 Update. There are no changes since the 2017 Update. All of the cumulative impacts associated with known proposed development within the AUAR area have been accounted for within the responses to the EAW questions contained in this AUAR. There are no other anticipated cumulative impacts associated with the proposed development.

Appendix A - Figures

Figure 6-1. 2040 Comprehensive Plan Future Use Map -
Maximum Development Scenario

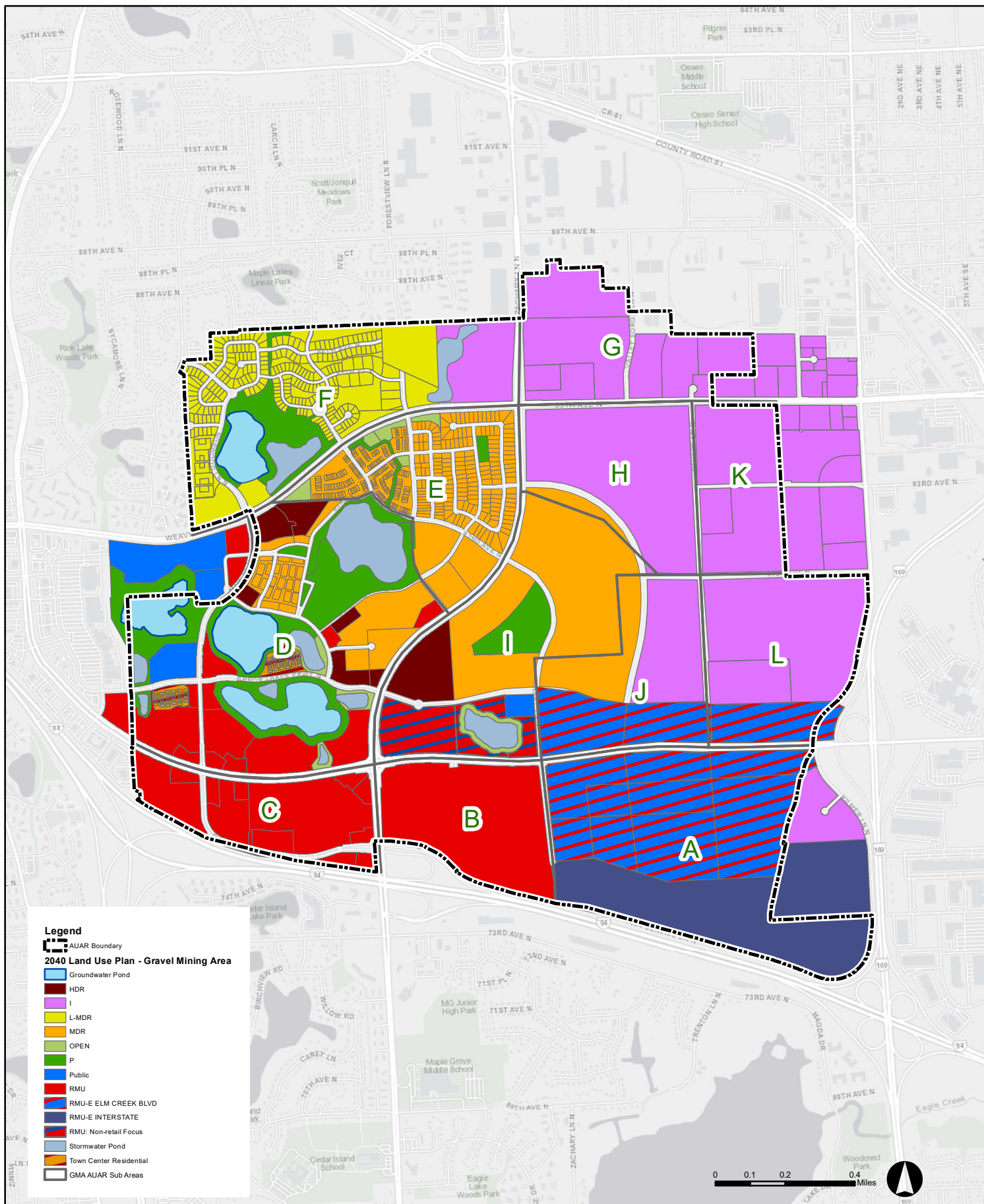


Figure 7-1. New Development Since 2017

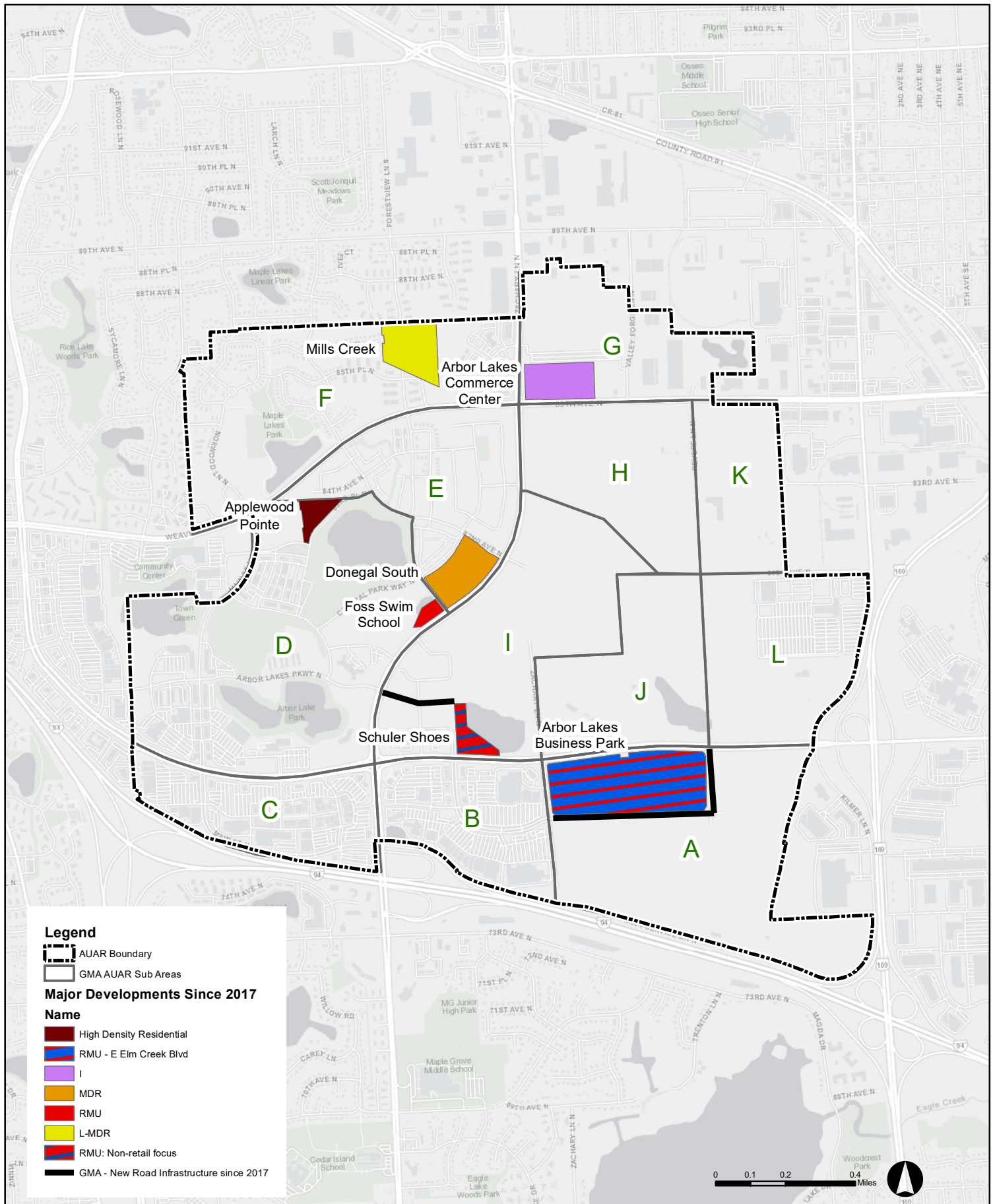
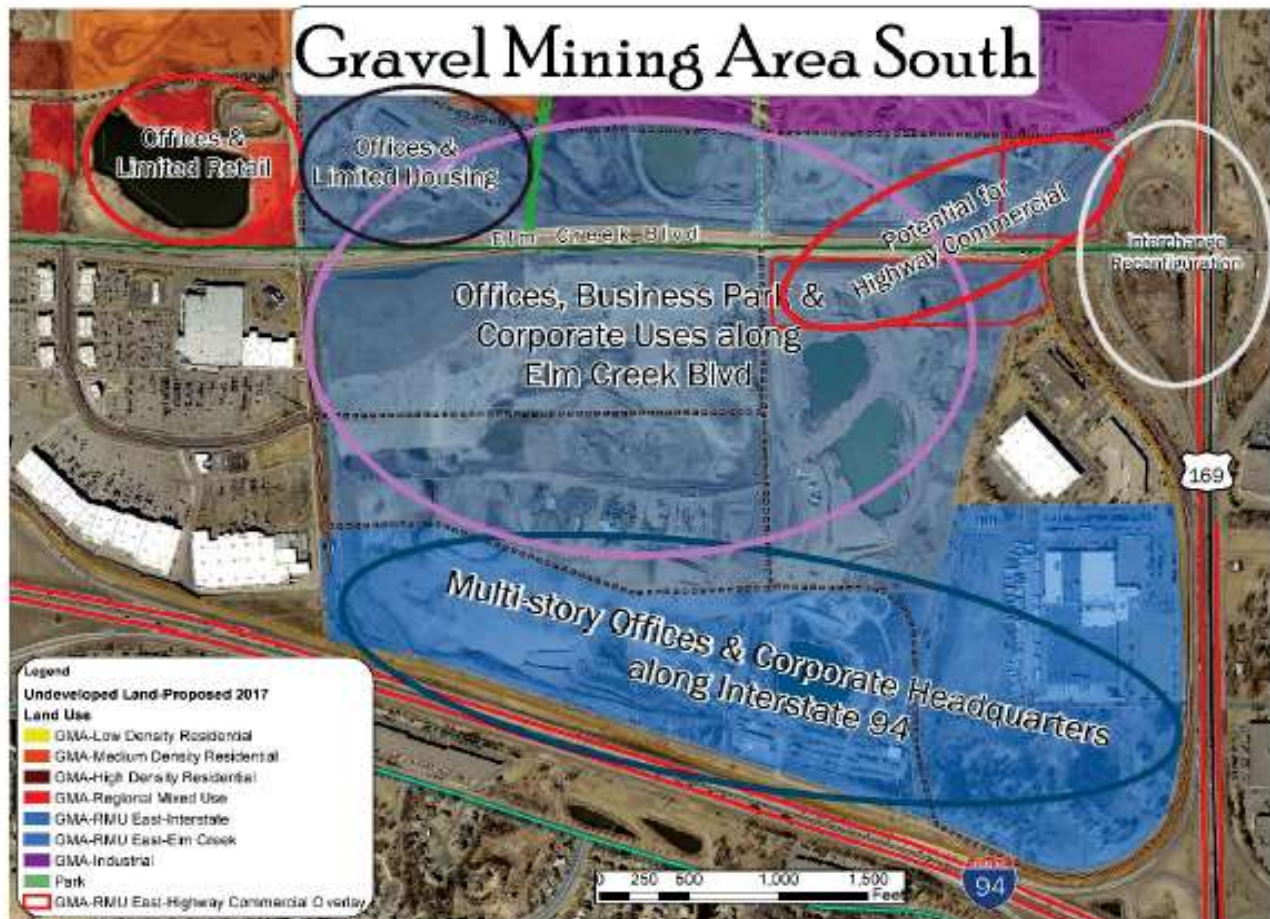


Figure 9-1. GMA Area South and GMA Area North Guidance



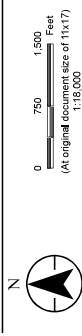
[illegible]

Title
MPCA WIMN Potentially Contaminated Sites




Client/Product 193805971

Maple Grove Gravel Milling Area
A11AP

Project Location

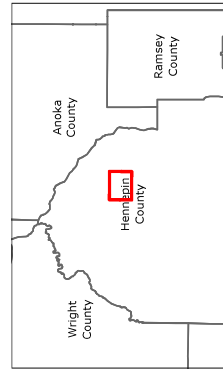


Legend

-  AUAR Boundary
 1/4 Mile Radius
 MPCA Sites

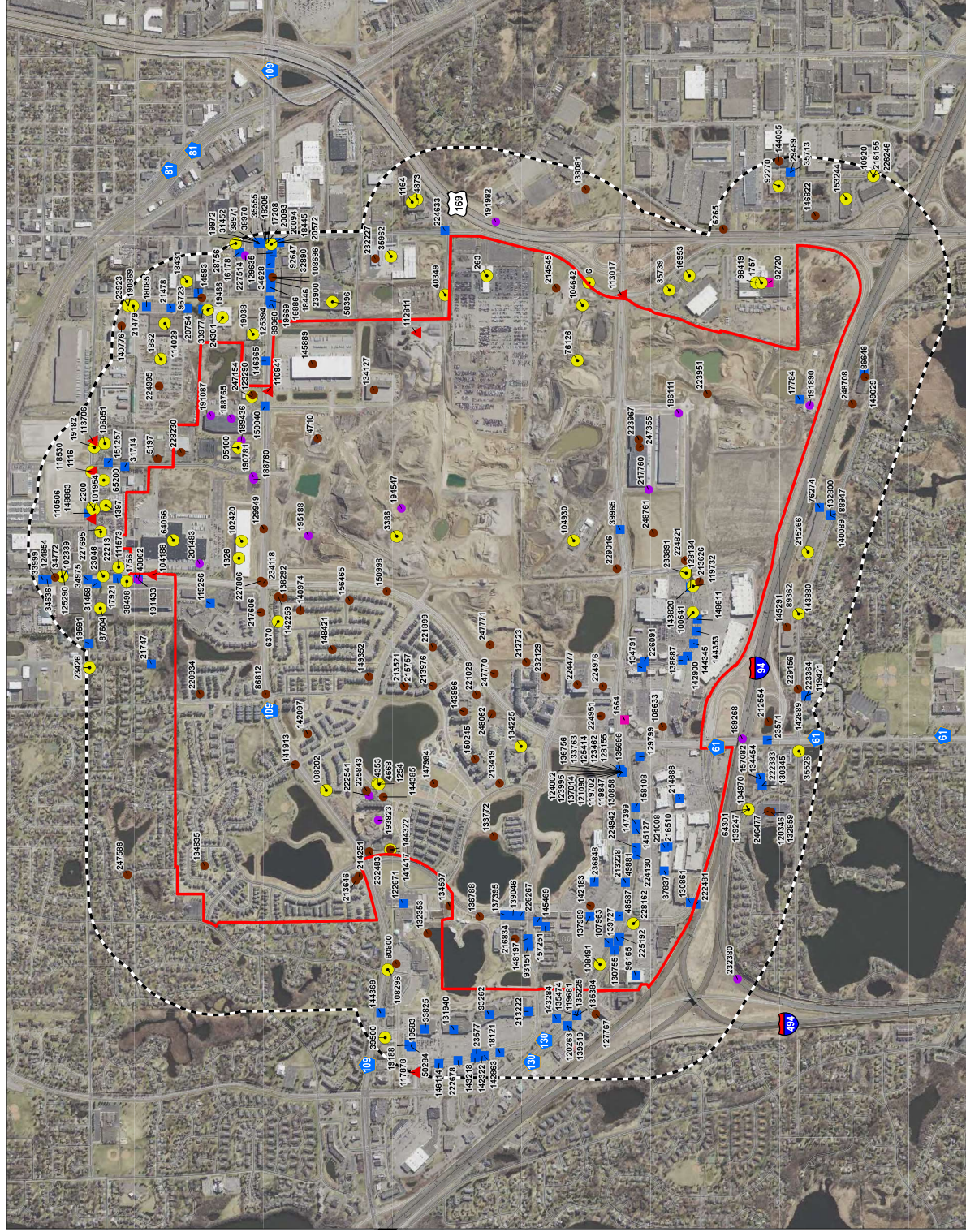
Program Name:

- Air Quality
- Hazardous Waste
- Investigation and Cleanup
- Multiple Programs
- Stormwater
- Tanks



Notes

1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Stantec, MnGeo, MnDOT, MPCA
3. Background: 2020 color 7-county



Appendix B - MPCA What's in My Neighborhood Contaminants

1480	18400 Mueller Machine Inc	Maple Grove	MN	55060-4025	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446463	HaasBosch Water	
1481	83294 Traxion Inc	Y	11212 Elm Ave N	55060-4029	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446464	HaasBosch Water	Multiple Activities
1482	115847 A-Linker & Anchor Corp PA	Y	11212 Elm Ave N	55060-4029	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446465	HaasBosch Water	Multiple Activities
1483	1386 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446466	HaasBosch Water	Multiple Activities
1484	10779 Stone & CO Inc N	Y	10779 Stone & CO Inc N	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446467	HaasBosch Water	Very small quantity generator
1485	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446468	HaasBosch Water	Very small quantity generator
1486	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446469	HaasBosch Water	Very small quantity generator
1487	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446470	HaasBosch Water	Very small quantity generator
1488	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446471	HaasBosch Water	Very small quantity generator
1489	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446472	HaasBosch Water	Very small quantity generator
1490	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446473	HaasBosch Water	Very small quantity generator
1491	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446474	HaasBosch Water	Very small quantity generator
1492	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446475	HaasBosch Water	Very small quantity generator
1493	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446476	HaasBosch Water	Very small quantity generator
1494	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446477	HaasBosch Water	Very small quantity generator
1495	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446478	HaasBosch Water	Very small quantity generator
1496	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446479	HaasBosch Water	Very small quantity generator
1497	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446480	HaasBosch Water	Very small quantity generator
1498	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446481	HaasBosch Water	Very small quantity generator
1499	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446482	HaasBosch Water	Very small quantity generator
1500	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www.patent.gov/patents/6446483	HaasBosch Water	Very small quantity generator
1501	10036 Area Construction - Collins Pk	Y	County Road 100	55060-4030	Maple Grove	Hangers	3	348	01/20/2006	Manufacture Rep.	Tech. Clms.	https://www	HaasBosch Water	Very small quantity generator

Hazardous Waste
Hazardous Waste, Small quantity generator, Industrial Stormwater, Wastewater
Hazardous Waste
Aboveground Tanks, Industrial Stormwater
Hazardous Waste, Very small quantity generator
Hazardous Waste, Very small quantity generator
Construction Stormwater
Brownfields, Voluntary Investigation and Cleanup Site Assessment
Hazardous Waste, Very small quantity generator
Hazardous Waste, Minimal quantity generator
Hazardous Waste, Very small quantity generator
Hazardous Waste
Hazardous Waste, Minimal quantity generator
Industrial Stormwater
Air Quality
Construction Stormwater, Hazardous Waste
Industrial Stormwater
Construction Stormwater
Aboveground Tanks, Hazardous Waste, Industrial Stormwater, Petroleum Remediation, Leak Site, Underground Tanks
Hazardous Waste, Very small quantity generator
Construction Stormwater
Brownfields, Petroleum Brownfield
Hazardous Waste
Hazardous Waste, Very small quantity generator
Hazardous Waste
Hazardous Waste, Very small quantity generator
Hazardous Waste, Minimal quantity generator
Hazardous Waste, Very small quantity generator
Construction Stormwater
Hazardous Waste
Construction Stormwater, Hazardous Waste, Very small quantity generator
Construction Stormwater
Hazardous Waste, Very small quantity generator
Construction Stormwater
Hazardous Waste
Construction Stormwater
Air Quality
Air Quality
Construction Stormwater
Construction Stormwater
Hazardous Waste, Very small quantity generator
Hazardous Waste, Very small quantity generator, Industrial Stormwater
Hazardous Waste, Minimal quantity generator
Hazardous Waste
Construction Stormwater
Hazardous Waste
Hazardous Waste
Air Quality, Industrial Stormwater, Wastewater, Industrial NPDES/SDS Permit
Hazardous Waste
Hazardous Waste, Minimal quantity generator
Hazardous Waste, Wastewater
Construction Stormwater
Aboveground Tanks, Air Quality, Brownfields, Voluntary Investigation and Cleanup, Hazardous Waste, Very small quantity generator, Industrial Stormwater, Superfund, Superfund Program Non-Island Sites
Hazardous Waste
Construction Stormwater
Industrial Stormwater
Hazardous Waste, Very small quantity generator
Hazardous Waste, Very small quantity generator

MN0005762228 MN0005762228
Malheur Ex MN00022776, MN00030941, MN000310213, SA0000322
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C0004820 C0004820
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MN000218432 MN000218432
C0002058 C0002058
MN000218432 MN000218432
MN000218432 MN000218432
MN000218432 MN000218432

HW	Hardware Waste	Hardware Waste	Other Commercial and Service Industry Machinery Manufacturing	N	45.1308672	45.4026823 D	DigiPrint - MPICo-internal map
HW	Multiple Programs	Hardware Waste	Other Metal Working Machinery Manufacturing, Machine Tool Manufacturing	N	45.1138684	45.4026823 D	DigiPrint - MPICo-internal map
HW	Hardware Waste	Hardware Waste	Office of Physicians	N	45.1094568	45.418463 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Office of Physicians	N	45.1071799	45.418463 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Office of General and Grand Jurors	N	45.1088567	45.41315 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Office of Districts	N	45.1089128	45.41315 A	Address Matching Number
ST	Stormwater	Stormwater		N	45.393956	45.42687 D	DigiPrint - MPICo-internal map
HW	Investigation and Cleanup	Investigation and Cleanup		N	45.1095944	45.424124 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Industrial Mill Manufacturing	N	45.111973	45.406264 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Industry Services	N	45.1017874	45.42152 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Office of Manufacturing	N	45.1056746	45.416268 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Other Personal Care Services	N	45.1076877	45.42376 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Per and Pet Supply Stores	N	45.102324	45.409964 A	Address Matching Number
HW	Hardware Waste	Stormwater		N	45.106181	45.397926 D	GPS - Survey
AD	Air Quality	Air Quality	Leases of Nonresidential Buildings (except Minnowhousen)	N	45.1048613	45.409964 A	Address Matching Number
HW	Multiple Programs	Hardware Waste, Stormwater		N	45.1042454	45.394848 A	Address Matching Number
ST	Stormwater	Stormwater		N	45.10222	45.4238 D	DigiPrint - Work Map Google / Yahoo! / Mapbox
ST	Stormwater	Stormwater		N	45.10292	45.4238 D	DigiPrint - Work Map Google / Yahoo! / Mapbox
HW	Multiple Programs	Stormwater		N	45.10383	45.42321 D	Interpretation Other
HW	Hardware Waste	Investigation and Cleanup, Stormwater, Tanks		N	45.1040833	45.42321 D	DigiPrint - MPICo-internal map
HW	Hardware Waste	Stormwater		N	45.10235	45.41402 D	Address Matching Number
HW	Investigation and Cleanup	Investigation and Cleanup	Offices of Districts	N	45.10262	45.41216 A	DigiPrint - MPICo-internal map
HW	Hardware Waste	Hardware Waste	Commis, Beauty Supplies, and Perfume Stores	N	45.1039214	45.417745 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Office of Physicians	N	45.108767	45.402323 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Hardware Merchant Wholesalers	N	45.105124	45.400185 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	All Other Home Furnishings Stores	N	45.103263	45.406252 A	Address Matching Number
HW	Hardware Waste	Hardware Waste		N	45.1044164	45.394848 A	Address Matching Number
HW	Hardware Waste	Stormwater		N	45.1037238	45.404882 A	Address Matching Number
HW	Hardware Waste	Stormwater		N	45.103233	45.403706 D	GPS - Other
HW	Multiple Programs	Hardware Waste, Stormwater	Home Furnishings Stores	N	45.106862	45.406823 A	GPS - Other
ST	Stormwater	Stormwater	Swimming Pool Facilities (Swimming Pools)	N	45.10787	45.41216 A	GPS - Other
ST	Stormwater	Stormwater		N	45.1118	45.406252 A	GPS - Other
HW	Hardware Waste	Stormwater	Office of Physicians (except Mental Health Specialists)	N	45.10687	45.406252 A	Address Matching Number
HW	Hardware Waste	Hardware Waste		N	45.10181	45.406252 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Industrial Design Services	N	45.1068726	45.416415 A	Address Matching Number
HW	Hardware Waste	Hardware Waste		N	45.103923	45.403706 D	Address Matching Number
ST	Stormwater	Stormwater		N	45.103445	45.42995 D	DigiPrint - MPICo-internal map
AD	Air Quality	Air Quality	Drugs and Medicines and Biotech Manufacturing	N	45.1044749	45.420636 A	DigiPrint - Work Map Google / Yahoo! / Mapbox
ST	Stormwater	Stormwater	Electric Bulk Power Transmission and Control	N	45.0986	45.42 D	DigiPrint - Work Map Google / Yahoo! / Mapbox
HW	Hardware Waste	Stormwater		N	45.1084	45.41316 D	DigiPrint - MPICo-internal map
HW	Multiple Programs	Hardware Waste, Stormwater		N	45.104515	45.42424 D	GPS - Survey
HW	Hardware Waste	Hardware Waste	Meatery Stores	N	45.1077564	45.4277028 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Machine Tool Manufacturing	N	45.1123454	45.4003262 A	Address Matching Number
HW	Hardware Waste	Hardware Waste		N	45.1137793	45.4170732 A	Address Matching Number
HW	Hardware Waste	Hardware Waste		N	45.106812	45.413167 A	Address Matching Number
HW	Hardware Waste	Stormwater		N	45.104768	45.41474 D	DigiPrint - MPICo-internal map
HW	Hardware Waste	Hardware Waste		N	45.105916	45.427243 A	Address Matching Number
AD	Air Quality	Air Quality	Regulation and Administration of Transportation Programs	N	45.1046515	45.4301248 A	Address Matching Number
HW	Multiple Programs	Hardware Waste, Stormwater, Water Quality	Construction and General Building, Concrete and Brick Manufacturing	N	45.1048613	45.418463 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Transportation, Equipment, and Certain Instrument Manufacturing	N	45.1048613	45.418463 A	Address Matching Number
HW	Hardware Waste	Hardware Waste	Construction of Sewer, Landfill, and Certain Instrument Manufacturing	N	45.1131416	45.406252 A	Address Matching Number
HW	Multiple Programs	Hardware Waste, Stormwater, Water Quality	Free Petfood Cans Manufacturing - Leases of Nonresidential Buildings (except Minnowhousen)	N	45.1039231	45.418463 A	Address Matching Number

Appendix C – Formal Responses



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
332 MINNESOTA STREET, SUITE E1500
ST. PAUL, MN 55101-1323

02/23/2023

Regulatory File No. MVP-2017-03768-PRH

THIS IS NOT A PERMIT

Beth Elliott
Stantec Consulting Services
2335 Highway 36 West
St. Paul, MN 55113

To: Beth Elliott:

We have received your submittal described below. You may contact the Project Manager with questions regarding the evaluation process. The Project Manager may request additional information necessary to evaluate your submittal.

File Number: MVP-2017-03768-PRH

Applicant: Dick Edwards

Project Name: Maple Grove, City of / Maple Grove Gravel Mining Area AUAR

Project Location: Section 19 of Township 119 N, Range 21 W, Hennepin County, Minnesota (Latitude: 45.100149558455; Longitude: -93.4222974726935)

Received Date: 10/27/2017

Project Manager: Samantha Coungeris
(651) 290-5268
Samantha.S.Coungeris@usace.army.mil

Additional information about the St. Paul District Regulatory Program can be found on our web site at <http://www.mvp.usace.army.mil/missions/regulatory>.

Please note that initiating work in waters of the United States prior to receiving Department of the Army authorization could constitute a violation of Federal law. If you have any questions, please contact the Project Manager.

Thank you.

U.S. Army Corps of Engineers
St. Paul District
Regulatory Branch



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
332 MINNESOTA STREET, SUITE E1500
ST. PAUL, MN 55101-1678

MARCH 3, 2023

Regulatory File No. MVP-2017-03768-SSC

City of Maple Grove
c/o Peter Vickerman
12800 Arbor Lakes Parkway, P.O. Box 1180
Maple Grove, Minnesota 55311

Dear Mr. Vickerman:

We have received the document entitled "2023 Update of the Maple Grove Gravel Mining Area Alternative Urban Areawide Review (AUAR)" dated February 14, 2023. The U.S. Army Corps of Engineers (Corps) has not received a request for a jurisdictional determination, pre-application meeting, or Department of the Army (DA) permit associated with the submitted document. In lieu of a specific response, please consider the following general information concerning our regulatory program that may apply to the proposed project.

If the proposal involves activity in navigable waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (Section 10). Section 10 prohibits the construction, excavation, or deposition of materials in, over, or under navigable waters of the United States, or any work that would affect the course, location, condition, or capacity of those waters, unless the work has been authorized by a Department of the Army permit.

If the proposal involves discharge of dredged or fill material into waters of the United States, it may be subject to the Corps of Engineers' jurisdiction under Section 404 of the Clean Water Act (CWA Section 404). Waters of the United States include navigable waters, their tributaries, and adjacent wetlands (33 CFR § 328.3). CWA Section 301(a) prohibits discharges of dredged or fill material into waters of the United States, unless the work has been authorized by a Department of the Army permit under Section 404. Information about the Corps permitting process can be obtained online at <http://www.mvp.usace.army.mil/regulatory>.

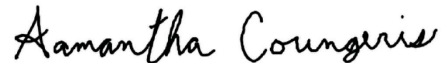
The Corps evaluation of a Section 10 and/or a Section 404 permit application involves multiple analyses, including (1) evaluating the proposal's impacts in accordance with the National Environmental Policy Act (NEPA) (33 CFR part 325), (2) determining whether the proposal is contrary to the public interest (33 CFR § 320.4), and (3) in the case of a Section 404 permit, determining whether the proposal complies with the Section 404(b)(1) Guidelines (Guidelines) (40 CFR part 230).

If the proposal requires a Section 404 permit application, the Guidelines specifically require that "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 CFR § 230.10(a)). Time and money spent on the proposal prior to applying for a Section 404 permit cannot be factored into the Corps' decision whether there is a less damaging practicable alternative to the proposal.

If an application for a Corps permit has not yet been submitted, the project proposer may request a pre-application consultation meeting with the Corps to obtain information regarding the data, studies or other information that will be necessary for the permit evaluation process. A pre-application consultation meeting is strongly recommended if the proposal has substantial impacts to waters of the United States, or if it is a large or controversial project.

If you have any questions, please contact me in our St. Paul office at (651) 290-5268 or Samantha.S.Coungeris@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,

A handwritten signature in black ink that reads "Samantha Coungeris". The script is cursive and fluid.

Samantha Coungeris
Project Manager



March 7, 2023

Peter Vickerman, Planning Manager
City of Maple Grove
12800 Arbor Lakes Parkway
P.O. Box 1180
Maple Grove, MN 55311

RE: Maple Grove 2023 Update of the Gravel Mining Area Alternative Urban Areawide Review (AUAR)
Metropolitan Council Review File No. 19357-6
Metropolitan Council District 1

Dear Peter:

Metropolitan Council staff completed its review of the 2023 Update of the Maple Grove Gravel Mining Area (GMA) AUAR (AUAR Update) to determine its accuracy and completeness in addressing regional concerns.

The 2023 Update summarizes development activity in the GMA since 2017 and includes the assumptions adopted in the City's 2040 Comprehensive Plan. The 2023 AUAR Update is proposed for all 1,907 acres comprising the development site. The southern boundary lies along interstate-94 (I-94) between State Trunk Highway 169 on the east, and the I-494/I-94 interchange on the west. The City desires to continue to redevelop the AUAR area into a mix of commercial, office, industrial, residential, and public uses. The existing land uses in the AUAR area only changed slightly since the 2017 AUAR Update consisting of approximately 100 acres of housing, industrial, commercial, and office development in the past five years.

Staff concludes that the AUAR Update is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies. The Metropolitan Disposal System has adequate capacity for the level of service identified in the AUAR for this project location. However, staff offers the following comments for your consideration:

Item 9 – Land Use (*Todd Graham, 651-602-1322*)

Forecasts are not discussed in the AUAR Update. This would be helpful information to provide. Council staff expect the City's consultant estimated employment and households outcomes as an intermediate step in its transportation analysis.

The development scenarios discussed are described as "No Further Build" (Alternative 1) and a maximum development scenario (Alternative 2). An allocation of Maple Grove's forecast to Traffic Analysis Zones (TAZ) is included in the City's 2040 Comprehensive Plan, finalized in 2020. The GMA is approximately Metropolitan Council TAZs #853, 855, 856, 858, 859, 860, and half of TAZ #857. In the City's 2040 Comprehensive Plan, the City has allocated future growth. The seven zones that comprise the GMA are expected, by the City's 2040 Comprehensive Plan, to gain +3,966 jobs and +1,844 households during 2020-2040. This households allocation is a cumulatively reasonable approximation of residential build-out, per AUAR Alternative 2.

If the commercial, office, and industrial land supply described in AUAR Alternative 2, Table 6.1, were added and absorbed into the market by 2040, this would add approximately 7,000 jobs. Council staff advise that this site is unlikely to capture this amount of employment growth. Council staff advise the City to consider a “middle” scenario to include in its AUAR.

Item 11b – Wastewater (Roger Janzig, 651-602-1119)

The AUAR Update appears to significantly over-estimate the wastewater flow projection for the project area. The Council agrees to provide the level of service based on the City’s approved population and employment forecasts. The AUAR project area wastewater flow projection of 6.4 MGD is approximately 50% higher than the City’s average daily flow of 4.66 MGD in 2021. Although not specifically stated, the Council assumes that the 6.4 MGD is an average daily flow figure. The Council recommends the City reevaluate its 6.4 MGD projection.

Before direct connection to the Metropolitan Council Interceptor, a Sewer Connection Permit will be required. To obtain a Sewer Connection Permit, prior to initiating this project, preliminary plans should be sent to Tim Wedin, Interceptor Engineering Assistant Manager (651-602-4571) at the Metropolitan Council Environmental Services.

Item 18 – Transportation (Bethany Brandt-Sargent, 651-602-1725)

Please consider the following transportation comments:

- Highway 169, I-94, and Elm Creek Boulevard are Tier 1 Freight Corridors and new infrastructure should ensure appropriate design for truck freight.
- Coordinate with Hennepin County and MnDOT to ensure access to the surrounding network is appropriate to the roadway’s existing functional classification.
- Refer to the Council’s congestion mitigation plan to evaluate ways to reduce trip generation from the developments. Continue to monitor traffic and work with MnDOT and Hennepin County to develop appropriate mitigation.
- Consider ways to connect to regional multimodal transportation systems. There are existing regional bikeways that surround the development and connections within the development to these bikeways should be considered.

The Council will not take formal action on the AUAR Update. If you have any questions or need further information, please contact Freya Thamman, Sector Representative/Principal Reviewer, at 651-602-1750.

Sincerely,



Angela R. Torres, AICP, Senior Manager
Local Planning Assistance

CC: Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Judy Johnson, Metropolitan Council District 1
Freya Thamman, Sector Representative/ Principal Reviewer
Reviews Coordinator

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From: [Peter Vickerman](#)
To: [Elliott, Beth](#)
Subject: FW: Maple Grove Gravel Mining Area AUAR 2023 Update - DNR Comments
Date: Wednesday, March 8, 2023 7:59:32 AM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[image002.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)

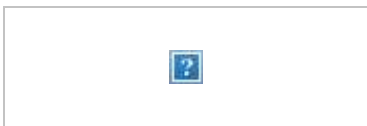
FYI

Peter Vickerman

Planning Manager

763-494-6046

pvickerman@maplegrovern.gov



From: Collins, Melissa (DNR) <Melissa.Collins@state.mn.us>
Sent: Tuesday, March 7, 2023 4:50 PM
To: Peter Vickerman <PVickerman@maplegrovern.gov>
Subject: Maple Grove Gravel Mining Area AUAR 2023 Update - DNR Comments

Dear Peter Vickman,

Thank you for the opportunity to review the Maple Grove Gravel Mining Area AUAR 2023 Update located in Hennepin County. DNR has reviewed the document and would like to offer the following minor comments:

1. Page 25, Rare Features. We concur that impacts to state-listed species are unlikely to occur as a result of this project.
2. Page 27, Mitigation Strategies (Rare Features). We encourage new developments to use native plants and seed mixes in project landscaping and stormwater features in order to provide pollinator habitat. Native plants typically do not require the use of soil amendments, and do not need as much irrigation.
3. Page 40, Mitigation Strategies (Dust and Odors). This section lists the use of dust

suppressants as a mitigation strategy. Many dust suppressants contain chloride, which does not break down and can pollute surface water and groundwater. Please limit the use products containing chloride for dust suppression within a Wellhead Protection Area as much as possible.

Please let me know if you have any questions.

Thank you,

Melissa Collins

Regional Environmental Assessment Ecologist | Ecological and Water Resources

Pronouns: She/her/hers

Minnesota Department of Natural Resources

1200 Warner Road

St. Paul, MN 55106

Phone: 651-259-5755

Email: melissa.collins@state.mn.us

mndnr.gov



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